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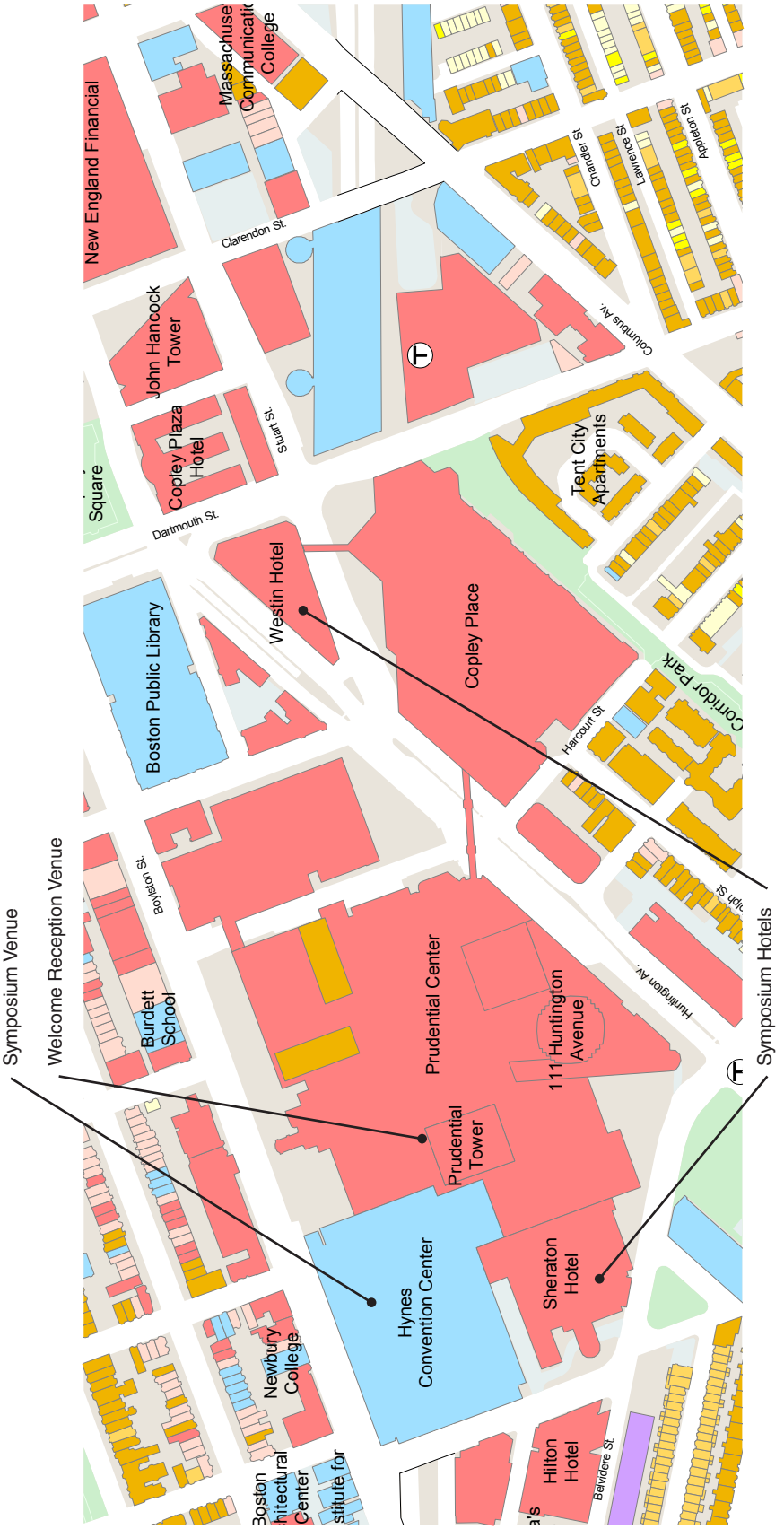
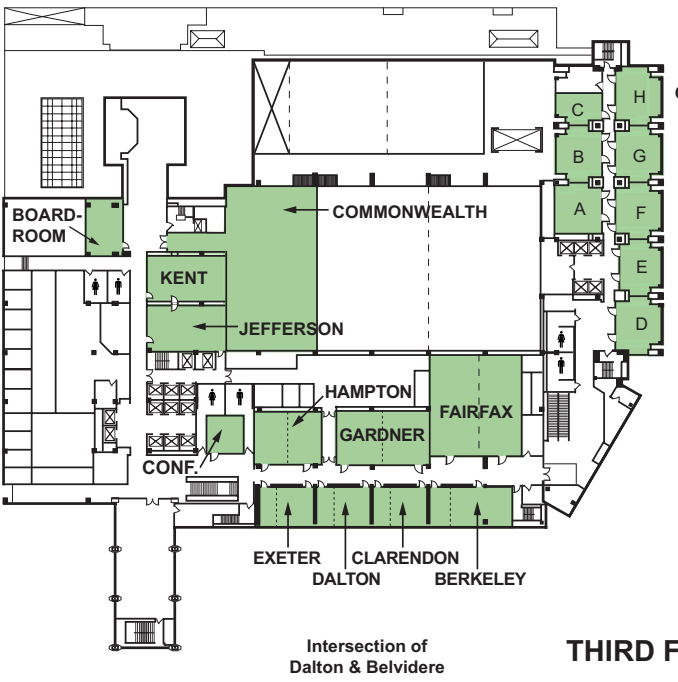
**Boston Area Map**



## Sheraton Floor Plans

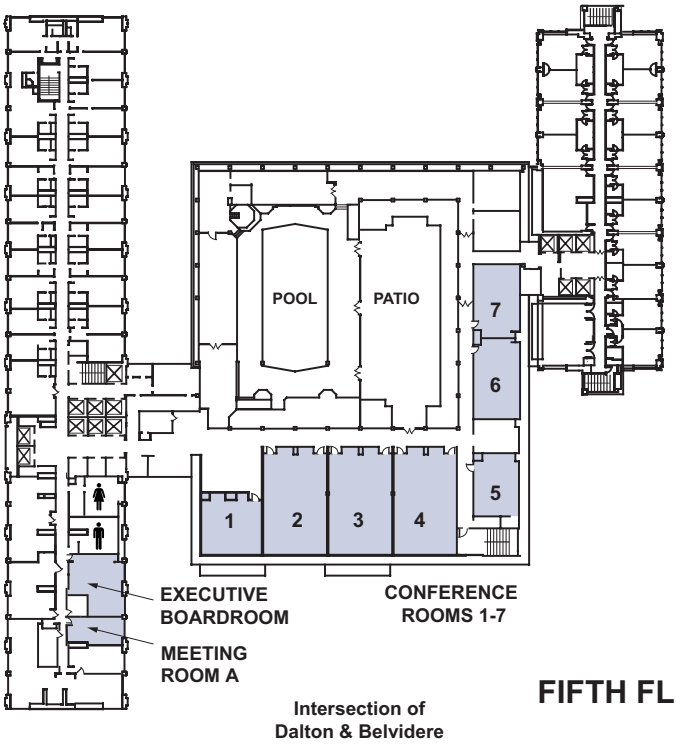



**THIRD FLOOR**

Career Forum: Commonwealth

Young Professionals Luncheon: Gardner

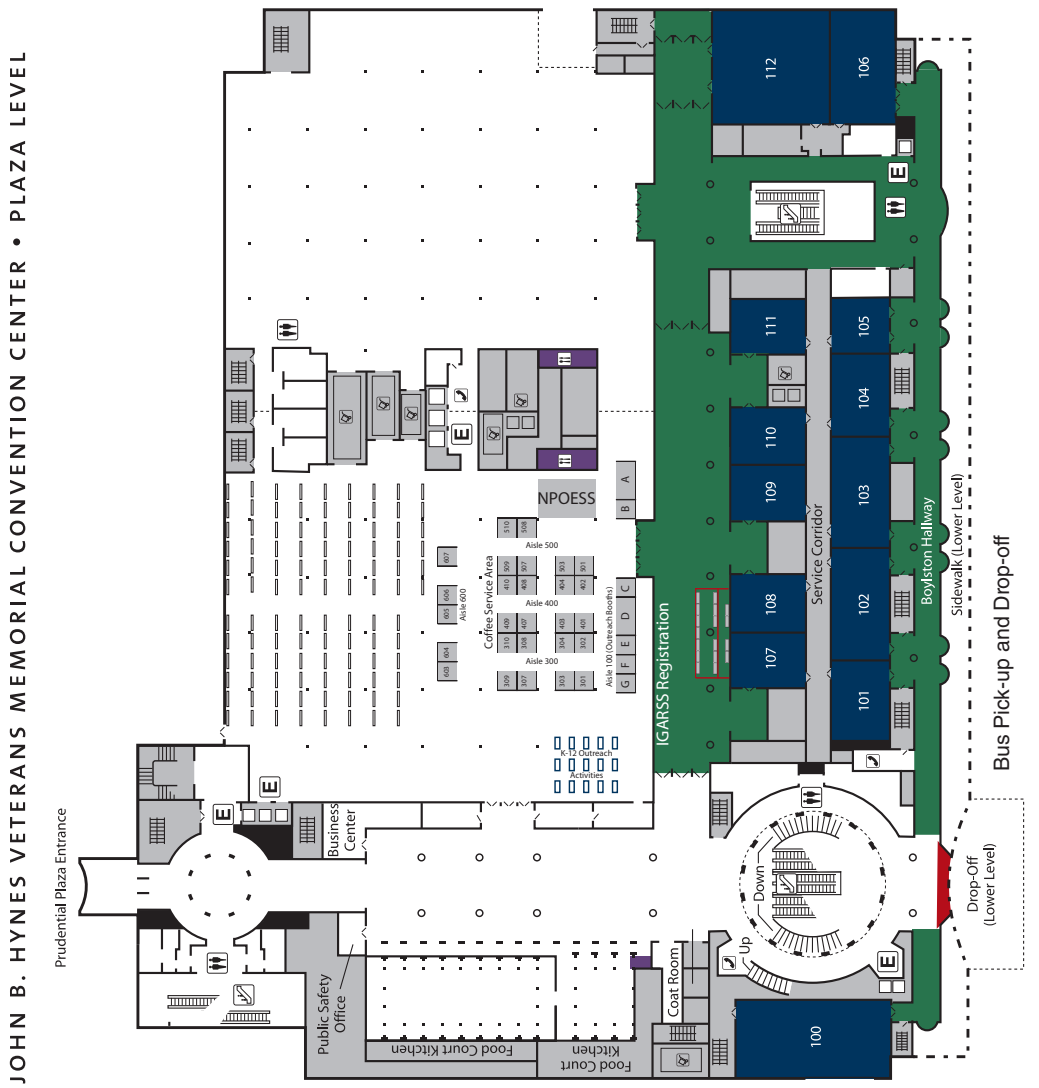
Chapter Chairs Dinner: Commonwealth



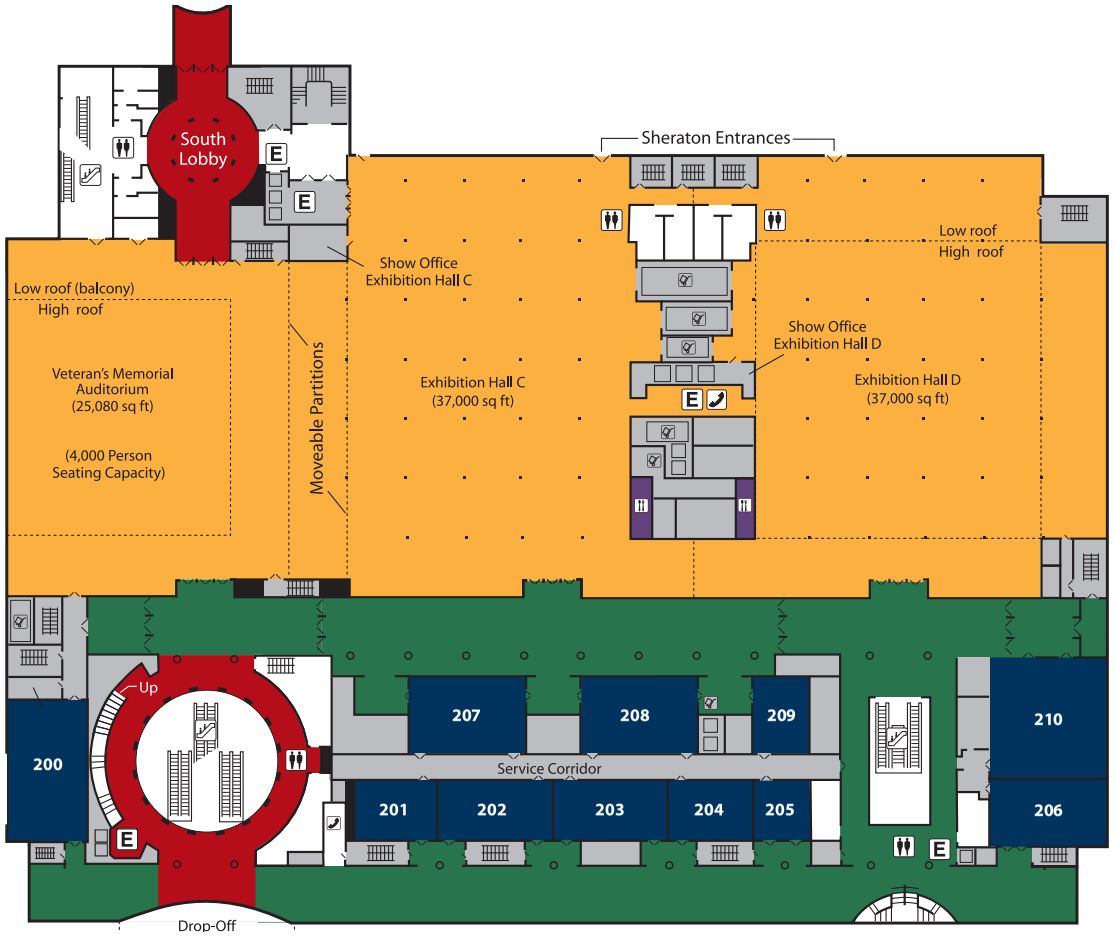

**FIFTH FLOOR**

Career Forum Interviews: Meeting Room A

## Hynes Floor Plans



## JOHN B. HYNES VETERANS MEMORIAL CONVENTION CENTER • SECOND LEVEL

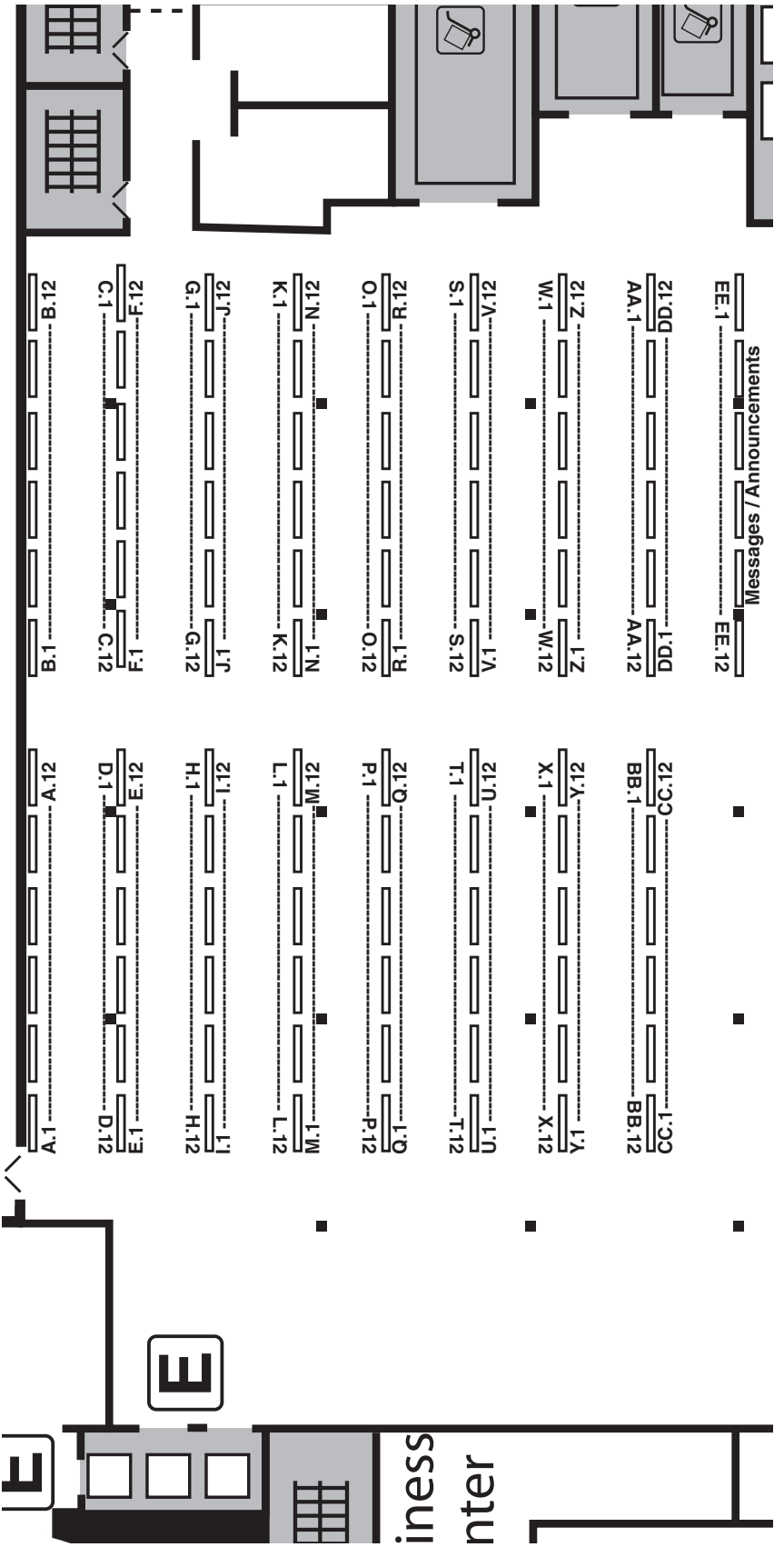


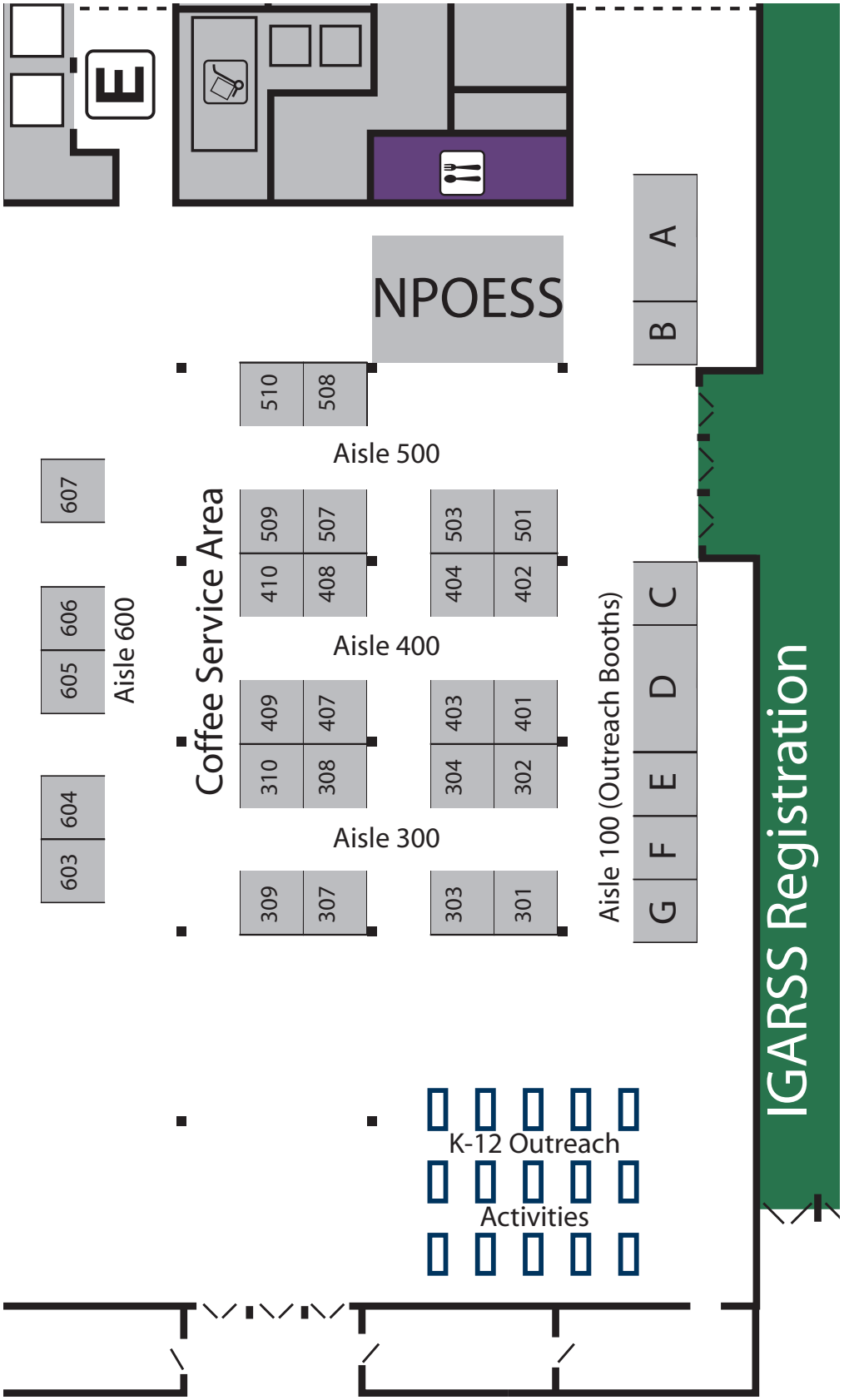

Plenary Session:
Veteran's Memorial Auditorium

Sessions:
Rooms 203, 210

Internet Cafe, Speaker Ready Room, Presentation Upload
Room 200

**Hynes Exhibit Hall A Poster Session Map and Exhibits Floor Plan**

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Aisle 100 (Outreach Booths)
IGARSS Registration
K-12 Outreach
Activities

## Sunday, July 6

| | Room 104 | Room 105 | Room 107 | Room 108 | Room 109 | Room 110 | Room 111 |
|---|---|---|---|---|---|---|---|
| **08:30 - 17:30** | FD-1: SAR Polarimetry: Basics, Processing Techniques and Applications *Presenters: Eric Pottier and Laurent Ferro-Famil, IETR UMR CNRS 6164, University of Rennes 1* | FD-3: Semantic content extraction from high resolution EO images *Presenters: Mihai Datcu, German Aerospace Center, DLR Oberpfaffenhofen and Klaus Seidel, Swiss Federal Institute of Technology, ETH Zurich* | | | | | |
| **08:30 - 17:00** | GEOSS Workshop XXII: Air Quality and Coastal Ecosystems, Room 101 | | | | | | |
| **08:30 - 12:30** | | | HD-1: Modeling the Spectral Responses of Natural Materials under Varying Environmental Parameters: Theoretical and Practical Challenges *Presenter: Gladimir V. G. Baranoski, University of Waterloo, Canada* | HD-3: Signal and Image Processing for Remote Sensing *Presenter: C. H. Chen, University of Massachusetts Dartmouth* | HD-5: An Introduction to AGI (Advanced Geospatial Intelligence) *Presenter: Brigette A. Martini, Riverside Research Institute* | HD-8: Interferometric Synthetic Aperture Radar (InSAR) Methods and Applications *Presenter: Howard Zebker, Stanford University* | HD-11: Introduction to Microwave Radiometry *Presenters: R. Vincent Leslie, MIT Lincoln Laboratory and Michael J. Schwartz, Microwave Atmospheric Science Group, NASA JPL* |
| **12:30 - 13:30** | Lunch Break | | | | | | |
| **13:30 - 17:30** | | | HD-2: Feedforward Neural Networks: Theory & Applications in Atmospheric Remote Sensing *Presenter: Frederick W. Chen* | HD-4: Data Models and Information Estimation in Multichannel Radar Remote Sensing Imagery *Presenter: Carlos López-Martínez, Technical University of Catalonia (UPC)* | HD-6: SAR oil spill observation *Presenter: Maurizio Migliaccio, Università di Napoli Parthenope* | HD-7: Fractal Models in Electromagnetic Scattering *Presenter: Daniele Riccio, University of Napoli Federico II* | HD-12: Microwave Remote Sensing of Snow *Presenter: Edward J. Kim, NASA Goddard Space Flight Center* |
| **16:00 - 18:00** | Soil Moisture Active and Passive (SMAP) Mission Information Meeting, Gardner Room, Sheraton Boston Hotel | | | | | | |
| **17:30 - 20:30** | Welcome Reception, Prudential Tower Skywalk | | | | | | |

## Monday, July 7

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **08:30 - 12:00** | Opening and Plenary Sessions, Hynes Veteran's Memorial Auditorium | | | | | | | | | | | |
| **12:00 - 13:20** | Lunch Break | | | | | | | | | | | |
| | **Room 101** | **Room 102** | **Room 103** | **Room 104** | **Room 105** | **Room 107** | **Room 108** | **Room 109** | **Room 110** | **Room 111** | **Room 203** | **Room 210** |
| **13:20 - 15:00** | MO3.101: Mapping Subsurface Geology in Arid Regions using Radar | MO3.102: RADARSAT | MO3.103: ALOS in 2008 II | MO3.104: Crop and Forest Monitoring with Microwave Radiometric Sensors I | MO3.105: Remote Sensing Applications to Archaeology I | MO3.107: Frontiers for Classification of Hyperspectral Data I | MO3.108: Information Extraction from High Resolution SAR images I | MO3.109: NPOESS and SENTINEL Missions | MO3.110: Coastal, Wetland, and Health Applications I | MO3.111: Ocean Surface Winds | MO3.203: Advances in Passive Microwave and Infrared Imaging and Sounding (In Honor of the Accomplishments of Prof. David H. Staelin) I | MO3.210: Implementation of GEOSS: Technical and Application Developments |
| **15:00 - 15:20** | Break | | | | | | | | | | | |
| **15:20 - 17:00** | MO4.101: Subsurface Object Detection | MO4.102: Moving Targets | MO4.103: ALOS in 2008 I | MO4.104: Crop and Forest Monitoring with Microwave Radiometric Sensors II | MO4.105: Remote Sensing Applications to Archaeology II | MO4.107: Frontiers for Classification of Hyperspectral Data II | MO4.108: Information Extraction from High Resolution SAR images II | MO4.109: Reflective-Band Vicarious Calibration for Intersensor Comparisons | MO4.110: Coastal, Wetland, and Health Applications II | MO4.111: Ocean Wind and Weather Sensing | MO4.203: Advances in Passive Microwave and Infrared Imaging and Sounding (In Honor of the Accomplishments of Prof. David H. Staelin) II | MO4.210: Implementation of GEOSS: Science and Modeling |
| **17:00 - 18:30** | Poster Sessions, See below | | | | | | | | | | | |
| **17:30 - 19:30** | Career Forum, Commonwealth Room, Sheraton Boston Hotel | | | | | | | | | | | |
| **17:30 - 19:00** | Frequency Allocations in Remote Sensing Technical Commitee Meeting, Room 111, Hynes Convention Center | | | | | | | | | | | |

## Monday, July 7, Poster Sessions

| | **Poster Area A** | **Poster Area B** | **Poster Area C** | **Poster Area D** | **Poster Area E** | **Poster Area F** | **Poster Area G** |
|---|---|---|---|---|---|---|---|
| **17:00 - 18:30** | MOP.A: Techniques for Agroecosystem Monitoring | MOP.B: Applications of Agroecosystem Monitoring | MOP.C: Ocean Wind Measurements | MOP.D: Active and Passive Ocean Observations | MOP.E: SAR Observations of Ocean Processes | MOP.F: Coastal, Wetland, and Health Applications III | MOP.G: Coastal, Wetland, and Health Applications IV |

## Tuesday, July 8

| | Room 101 | Room 102 | Room 103 | Room 104 | Room 105 | Room 107 | Room 108 | Room 109 | Room 110 | Room 111 | Room 203 | Room 210 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **08:20 - 10:00** | TU1.101: Subsurface Sensing I | TU1.102: Joint Time-Frequency Analysis of SAR | TU1.103: Student Paper Competition I | TU1.104: Passive Microwave Soil Moisture Algorithms | TU1.105: Advanced Lidar Technologies and Applications to 3D Landcover Structure I | TU1.107: Data Fusion I | TU1.108: New Challenges and Perspectives with High Resolution Spaceborne SAR Systems | TU1.109: Advances in Hyperspectral Applications: Application Developments for Hyperspectral Imaging Systems | TU1.110: Vegetation Biophysical Parameter Estimation I | TU1.111: Frequency Allocation for Remote Sensing and Radio Frequency Interference Effects in Microwave Radiometry I | TU1.203: Synergism of Active and Passive Microwave Sensors I | TU1.210: Numerical Weather Prediction (NWP), Radiance Data Assimilation and Ocean Synoptics |
| **10:00 - 10:20** | Break | | | | | | | | | | | |
| **10:20 - 12:00** | TU2.101: Subsurface Sensing II | TU2.102: TerraSAR-X Commissioning Phase Results | TU2.103: Student Paper Competition II | TU2.104: Tower and Aircraft Soil Moisture Remote Sensing | TU2.105: Lidar Sensors and Applications I | TU2.107: Data Fusion II | TU2.108: Spatial Data Fusion in PolSAR and Pol-InSAR Imaging | TU2.109: Advances in Hyperspectral Applications: Hyperspectral Sensing of Forests | TU2.110: Vegetation Biophysical Parameter Estimation II | TU2.111: Frequency Allocation for Remote Sensing and Radio Frequency Interference Effects in Microwave Radiometry II | TU2.203: Synergism of Active and Passive Microwave Sensors II | TU2.210: Assimilation of Satellite Radiances |
| **12:00 - 13:20** | Lunch Break | | | | | | | | | | | |
| **13:20 - 15:00** | TU3.101: Remote Sensing for Landmine and Unexploded Ordnance Identification and Removal I | TU3.102: TerraSAR-X satellite: Status and First Application Results I | TU3.103: Ionospheric Effects in Polarimetric and Interferometric SAR Imagery I | TU3.104: Radar Remote Sensing of Soil Moisture | TU3.105: EARLINET -- The European Aerosol Research Lidar Network I | TU3.107: Urban Areas and Buildings | TU3.108: Multichannel - Multidimensional Coherent SAR Data Combination Techniques I | TU3.109: Rare Target Detection in Hyperspectral Imagery I | TU3.110: Forests and Vegetation: SAR Interferometry and Polarimetry I | TU3.111: Microwave Radiometer Technology I | TU3.203: High Wind Speed Retrievals from SAR and Scatterometry I | TU3.210: Radiance Assimilation and Retrieval Methods I |
| **15:00 - 15:20** | Break | | | | | | | | | | | |
| **15:20 - 17:00** | TU4.101: Remote Sensing for Landmine and Unexploded Ordnance Identification and Removal II | TU4.102: TerraSAR-X satellite: Status and First Application Results II | TU4.103: Ionospheric Effects in Polarimetric and Interferometric SAR Imagery II | TU4.104: Global Soils and Soil Moisture Products | TU4.105: EARLINET -- The European Aerosol Research Lidar Network II | TU4.107: Multi- and Hyperspectral Image Processing I | TU4.108: Multichannel - Multidimensional Coherent SAR Data Combination Techniques I | TU4.109: Rare Target Detection in Hyperspectral Imagery II | TU4.110: Forests and Vegetation: SAR Interferometry and Polarimetry II | TU4.111: Microwave Radiometer Technology II | TU4.203: High Wind Speed Retrievals from SAR and Scatterometry II | TU4.210: Memorial Session for Professor Jin Au Kong |

| | |
|---|---|
| **17:00 - 18:30** | Poster Sessions, See below |
| **17:30 - 19:30** | Exhibitor Reception, IGARSS Exhibit Hall, Hynes Convention Center |
| **18:00 - 19:00** | Data Fusion Technical Committee Meeting, Room 107, Hynes Convention Center |

## Tuesday, July 8, Poster Sessions

| | Poster Area A | Poster Area B | Poster Area C | Poster Area D | Poster Area E | Poster Area F | Poster Area G | Poster Area H | Poster Area I | Poster Area J | Poster Area K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **17:00 - 18:30** | TUP.A: Passive Microwave Sensing of Soil Moisture | TUP.B: Soil Moisture Experimental Observations | TUP.C: Surface Roughness and Soil Properties I | TUP.D: Surface Roughness and Soil Properties II | TUP.E: Vegetation Biophysical Parameter Estimation III | TUP.F: Radar and Soil Moisture | TUP.G: Radiance Assimilation and Retrieval Methods II | TUP.H: Applications in Data and Image Processing | TUP.I: Image Analysis and Classification I | TUP.J: Image Analysis and Classification II | TUP.K: Target Detection and Pattern Recognition |

| | Poster Area L | Poster Area M | Poster Area N | Poster Area O | Poster Area P | Poster Area Q | Poster Area R | Poster Area S | Poster Area T | Poster Area U | Poster Area V |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TUP.L: Feature Extraction and Reduction | TUP.M: Multitemporal Processing | TUP.N: Hyperspectral: Compression and Implementation | TUP.O: Multispectral and Hyperspectral Image Analysis and Classification | TUP.P: High Resolution Optical Data Processing | TUP.Q: Image Processing: Calibration and Correction | TUP.R: Spatial Resolution - Registration | TUP.S: Lidar Sensors and Applications II | TUP.T: Lidar Sensors and Applications III | TUP.U: Microwave Synthetic Aperture Radiometers I | TUP.V: Microwave Real Aperture Radiometers: Technology and Calibration I |

| | Poster Area W | Poster Area X | Poster Area Y | Poster Area Z | Poster Area AA | Poster Area BB | Poster Area CC | Poster Area DD | Poster Area EE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TUP.W: Microwave Real Aperture Radiometers: Technology and Calibration II | TUP.X: Infrared and Passive Microwave Satellite Missions | TUP.Y: Landslides and Geological Hazards | TUP.Z: Geological Applications of Radar | TUP.AA: Geological Applications and GIS | TUP.BB: Geographic Information Science Tools | TUP.CC: Geographic Information Science Applications I | TUP.DD: Geographic Information Science Applications II | TUP.EE: Geographic Information Science Outreach | | |

## Wednesday, July 9

| | Room 101 | Room 102 | Room 103 | Room 104 | Room 105 | Room 107 | Room 108 | Room 109 | Room 110 | Room 111 | Room 203 | Room 210 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **08:20 - 10:00** | WE1.101: Near Sub-Surface Electromagnetic Imaging: Methods and Applications I | WE1.102: SAR/PolSAR/InSAR for Environmental Monitoring I | WE1.103: Active Microwave Remote Sensing of Terrestrial Snow I | WE1.104: Soils and Hydrologic Applications | WE1.105: Ocean Altimetry | WE1.107: Multi- and Hyperspectral Image Processing II | WE1.108: TerraSAR-X & TanDEM-X: Features & Calibration | WE1.109: Atmospheric Compensation Techniques for Imaging Spectrometer Data I | WE1.110: Land Cover Classification | WE1.111: Change Detection | WE1.203: Atmospheric Profiling I | WE1.210: Earth Science Decadal Survey NASA Missions |
| **10:00 - 10:20** | Break | | | | | | | | | | | |
| **10:20 - 12:00** | WE2.101: Near Sub-Surface Electromagnetic Imaging: Methods and Applications II | WE2.102: SAR/PolSAR/InSAR for Environmental Monitoring I | WE2.103: Active Microwave Remote Sensing of Terrestrial Snow II | WE2.104: Scaling Issues in Remote Sensing of Soil Moisture | WE2.105: Ocean and Ice Altimetry | WE2.107: Multi- and Hyperspectral Image Processing III | WE2.108: Multi Aperture Multistatic SAR | WE2.109: Atmospheric Compensation Techniques for Imaging Spectrometer Data II | WE2.110: Forest Structure and Biomass | WE2.111: Analysis Techniques: Land Use / Land Cover | WE2.203: Atmospheric Profiling II | WE2.210: Observation Technologies For The Next Generation In Geoscience I |
| **11:00 - 21:00** | Technical Tour: Woods Hole Oceanographic Organizations. Bus Pickup / Dropoff at the Hynes Convention Center, Boylston Entrance | | | | | | | | | | | |
| **12:00 - 13:20** | Lunch Break | | | | | | | | | | | |
| **13:20 - 15:00** | WE3.101: Geological Applications of Hyper- and Multi-spectral Imaging | WE3.102: PolSAR and Pol-InSAR for Agricultural Information Product Development I | WE3.103: Passive Microwave Remote Sensing of Terrestrial Snow I | WE3.104: Multiscale Processing | WE3.105: Coastal Altimetry I | WE3.107: Data Fusion III | WE3.108: Bistatic SAR I | WE3.109: Remote Sensing Education and Outreach | WE3.110: Advances in Hyperspectral Applications: Hyperspectral Remote Sensing of Vegetation | WE3.111: Image Information Mining I | WE3.203: Retrieval of Aerosol Characteristics from Ground-based and Satellite Observations | WE3.210: Observation Technologies For The Next Generation In Geoscience II |
| **15:00 - 15:20** | Break | | | | | | | | | | | |
| **15:20 - 17:00** | WE4.101: Geological Applications of Synthetic Aperture Radar | WE4.102: PolSAR and Pol-InSAR for Agricultural Information Product Development II | WE4.103: Passive Microwave Remote Sensing of Terrestrial Snow II | WE4.104: Evapotranspiration Estimation at Field Scale | WE4.105: Coastal Altimetry II | WE4.107: Geospatial Based Analysis | WE4.108: Bistatic SAR II | WE4.109: Remote Sensing and Policy Decisions | WE4.110: Remote Sensing on the African Continent | WE4.111: Image Information Mining II | WE4.203: Optical & Infrared Modeling for Remote Sensing I | WE4.210: Advanced Lidar Technologies and Applications to 3D Landcover Structure II |

| | |
|---|---|
| **17:00 - 18:30** | Poster Sessions, See below |
| **18:00 - 19:00** | USNC-URSI Commission F Meeting, Room 111, Hynes Convention Center |
| **18:00 - 20:30** | Soccer Game, MIT Soccer Field. Bus Pickup / Dropoff at the Hynes Convention Center, Boylston Entrance |
| **19:30 - 22:00** | Technical Committees and Chapter Chairs Dinner, Commonwealth Room, Sheraton Boston Hotel |

## Wednesday, July 9, Poster Sessions

| | Poster Area A | Poster Area B | Poster Area C | Poster Area D | Poster Area E | Poster Area F | Poster Area G | Poster Area H | Poster Area I | Poster Area J | Poster Area K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **17:00 - 18:30** | WEP.A: Land Cover Classification and Characterization | WEP.B: Hyperspectral and Optical Remote Sensing of Vegetation | WEP.C: Optical & Infrared Modeling for Remote Sensing II | WEP.D: Forests and Vegetation: MODIS | WEP.E: Forests and Vegetation: Modeling, Algorithms and Simulations | WEP.F: Forests and Vegetation: Seasonal Processes | WEP.G: Forests and Vegetation: Fire, Distrurbance, and Recovery | WEP.H: Drought and Evapotranspiration | WEP.I: Ocean Altimetry | WEP.J: Atmospheric Profiling III | WEP.K: Satellite Data-based Methods for Determining Aerosol Characteristics |

| | Poster Area L | Poster Area M | Poster Area N | Poster Area O | Poster Area P | Poster Area Q | Poster Area R | Poster Area S | Poster Area T | Poster Area U | Poster Area V |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WEP.L: Aerosol and Trace Gas Monitoring using a Combination of Ground-based and Satellite Observations | WEP.M: Data Fusion IV | WEP.N: Data Mining Tools & Applications | WEP.O: Ensemble Filtering and Data Assimilation | WEP.P: Inverse Methods and Data Processing | WEP.Q: Statistical and Physics-Based Inverse Methods | WEP.R: SAR Image Methods | WEP.S: SAR Instruments, Missions and Atmospheric Effects | WEP.T: Moving and Stationary Targets | WEP.U: Multistatic SAR and 3-D Imaging | WEP.V: Urban Remote Sensing I |

| | Poster Area W | Poster Area X | Poster Area Y | Poster Area Z | Poster Area AA | Poster Area BB | Poster Area CC | Poster Area DD | Poster Area EE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WEP.W: Urban Remote Sensing II | WEP.X: Urban Remote Sensing III | | WEP.Z: Remote Sensing of Road Networks and Vehicles | WEP.AA: Remote Sensing of Urban Heat Islands | WEP.BB: Soil & Air Pollution Monitoring | WEP.CC: Water Pollution Monitoring | WEP.DD: Data Management and Systems I | WEP.EE: Education, Outreach and Policy | | |

## Thursday, July 10

| | Room 101 | Room 102 | Room 103 | Room 104 | Room 105 | Room 107 | Room 108 | Room 109 | Room 110 | Room 111 | Room 203 | Room 210 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **08:20 - 10:00** | TH1.101: Crustal Deformation and Subsurface Sensing | TH1.102: Advanced Methods for Polarimetric Information Extraction I | TH1.103: Remote Sensing of the Cryosphere I | TH1.104: Change Detection in Forested Landscapes I | TH1.105: Sensing and Modeling Ocean Physics | TH1.107: Image Analysis for Classification and Detection | TH1.108: Interferometry I | TH1.109: Space Hyperspectral Sensors and Programs I | TH1.110: Remote Sensing of Agricultural Production and Sustainability I | TH1.111: Improving Access to Earth Science Data: New Tools and Services I | TH1.203: Tropical Rainfall Measurement Mission I | TH1.210: Human and Environmental Health |
| **10:00 - 10:20** | Break | | | | | | | | | | | |
| **10:20 - 12:00** | TH2.101: 3D Urban Mapping I | TH2.102: Advanced Methods for Polarimetric Information Extraction II | TH2.103: Remote Sensing of the Cryosphere II | TH2.104: Recent Advances in Change Detection Techniques | TH2.105: High Resolution Microwave Sensing of Ocean Wind and Waves | TH2.107: Kernel Methods for Image Analysis and Classification | TH2.108: Interferometry II | TH2.109: Space Hyperspectral Sensors and Programs II | TH2.110: Remote Sensing of Agricultural Production and Sustainability II | TH2.111: Improving Access to Earth Science Data: New Tools and Services II | TH2.203: Tropical Rainfall Measurement Mission II | TH2.210: Atmospheric Remote Sensing for Air Pollution and Human Health |
| **12:00 - 13:20** | Lunch Break | | | | | | | | | | | |
| **13:20 - 15:00** | TH3.101: 3D Urban Mapping II | TH3.102: SAR Polarimetry: Theory and Applications I | TH3.103: Active Remote Sensing of the Cryosphere I | TH3.104: Change Detection in Land Use / Land Cover I | TH3.105: Optical Sensing in the Coastal Ocean | TH3.107: Image Classification - Techniques and Applications | TH3.108: SAR Processing I | TH3.109: Future Space-based Optical Instruments | TH3.110: Applications in Wetlands and Inland Waters I | TH3.111: Data Management and Systems II | TH3.203: Global Precipitation Mission I | TH3.210: A Climate of Change -- NASA's Applied Sciences Program I |
| **15:00 - 15:20** | Break | | | | | | | | | | | |
| **15:20 - 17:00** | TH4.101: Urban Road Networks | TH4.102: SAR Polarimetry: Theory and Applications II | TH4.103: Active Remote Sensing of the Cryosphere II | TH4.104: Change Detection in Urban Landscapes I | TH4.105: Surface Temperature and Salinity I | TH4.107: Image Analysis and Classification - Quality Issues | TH4.108: SAR Processing II | TH4.109: Technologies for Hyperspectral Imaging | TH4.110: Pollution Monitoring | TH4.111: Data Management and Systems III | TH4.203: Global Precipitation Mission II | TH4.210: A Climate of Change -- NASA's Applied Sciences Program II |
| **17:00 - 18:30** | Poster Sessions, See below | | | | | | | | | | | |
| **18:00** | Awards Banquet, Peabody Essex Museum, Salem. Bus Pickup / Dropoff at the Sheraton Boston Hotel, Dalton Street Entrance | | | | | | | | | | | |

## Thursday, July 10, Poster Sessions

| | Poster Area A | Poster Area B | Poster Area C | Poster Area D | Poster Area E | Poster Area F | Poster Area G | Poster Area H | Poster Area I | Poster Area J | Poster Area K |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **17:00 - 18:30** | THP.A: Change Detection in Forested Landscapes II | THP.B: Change Detection in Land Use / Land Cover II | THP.C: Change Detection in Urban Landscapes II | THP.D: Land Use/Land Cover Classification I | THP.E: Land Use/Land Cover Classification II | THP.F: Land Use/Land Cover Classification III | THP.G: Applications in Land Use / Land Cover Characterization I | THP.H: Applications in Land Use / Land Cover Characterization II | THP.I: Retrieval of Water and Energy Balance Parameters I | THP.J: Applications in Wetlands and Inland Waters II | THP.K: Applications in Wetlands and Inland Waters III |

| | Poster Area L | Poster Area M | Poster Area N | Poster Area O | Poster Area P | Poster Area Q | Poster Area R | Poster Area S | Poster Area T | Poster Area U | Poster Area V |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | THP.L: Ocean Color | THP.M: Surface Temperature and Salinity II | THP.N: Clouds and Precipitation I | THP.O: Clouds and Precipitation II | THP.P: Land Ice and Snow I | THP.Q: Land Ice and Snow II | THP.R: Land Ice and Snow III | THP.S: Sea Ice | THP.T: Microwave Scattering and Propagation I | THP.U: Volume and Surface Scattering | THP.V: Microwave Scattering and Propagation II |

| | Poster Area W | Poster Area X | Poster Area Y | Poster Area Z | Poster Area AA | Poster Area BB | Poster Area CC | Poster Area DD | Poster Area EE | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | THP.W: Interferometry III | THP.X: Interferometry / Polarimetry | THP.Y: SAR Processing III | THP.Z: SAR Processing IV | THP.AA: SAR Processing V | THP.BB: UAV Sensor Systems | THP.CC: Optical Instrument Calibration | THP.DD: Optical Technologies | THP.EE: Active Microwave Remote Sensing I | | |

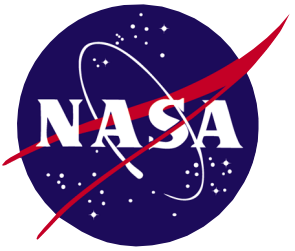
## Friday, July 11

| | Room 101 | Room 102 | Room 103 | Room 104 | Room 105 | Room 107 | Room 108 | Room 109 | Room 110 | Room 111 | Room 203 | Room 210 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **08:20 - 10:00** | FR1.101: Mapping Urban Areas I | FR1.102: Digital Beamforming for Future Remote Sensing Systems I | FR1.103: Passive Remote Sensing of the Cryosphere | FR1.104: Land Use/ Land Cover Classification IV | FR1.105: Pansharpening | FR1.107: Geospatial Standards & Services I | FR1.108: Active Microwave Remote Sensing - Weather | FR1.109: Rough Surface Scattering and Remote Sensing I | FR1.110: Forest Parameter Estimation from Space using SAR I | FR1.111: Earth Observation Sensor Web I | FR1.203: Collaborative Adaptive Sensing of the Atmosphere I | FR1.210: Baseline Climate Identification and Global Change |
| **10:00 - 10:20** | Break | | | | | | | | | | | |
| **10:20 - 12:00** | FR2.101: Mapping Urban Areas II | FR2.102: Digital Beamforming for Future Remote Sensing Systems II | FR2.103: Sea Ice as an Indicator for Climate Change I | FR2.104: Land Use/ Land Cover Classification V | FR2.105: Image Processing: Registration | FR2.107: Geospatial Standards & Services II | FR2.108: Active Microwave Remote Sensing II | FR2.109: Rough Surface Scattering and Remote Sensing II | FR2.110: Forest Parameter Estimation from Space using SAR II | FR2.111: Earth Observation Sensor Web II | FR2.203: Collaborative Adaptive Sensing of the Atmosphere II | FR2.210: AMSR-E I |
| **12:00 - 13:20** | Lunch Break | | | | | | | | | | | |
| **13:20 - 15:00** | FR3.101: Urban Remote Sensing VII | FR3.102: Polarimetric SAR Image Segmentation and Analysis | FR3.103: Sea Ice as an Indicator for Climate Change II | FR3.104: Microwave Remote Sensing for Land Use and Land Cover Change | | FR3.107: Hyperspectral Image Analysis for Detection and Classification | FR3.108: Microwave Synthetic Aperture Radiometers II | FR3.109: Electromagnetic Methods for Remote Sensing I | FR3.110: Vegetation 3D Structure: Combining Lidar and Radar I | FR3.111: Data Assimilation and Ensemble Filtering | FR3.203: Clouds and Precipitation III | FR3.210: AMSR-E II |
| **14:00 - 17:00** | International Spaceborne Imaging Spectroscopy Working Group Meeting, Room 105, Hynes Convention Center | | | | | | | | | | | |
| **15:00 - 15:20** | Break | | | | | | | | | | | |
| **15:20 - 17:00** | FR4.101: Urban Remote Sensing VIII | | | FR4.104: Retrieval of Water and Energy Balance Parameters II | | FR4.107: Optical Sensor Technology | FR4.108: Low-cost Aerial and UAV Remote Sensing | FR4.109: Electromagnetic Methods for Remote Sensing II | FR4.110: Vegetation 3D Structure: Combining Lidar and Radar II | FR4.111: Data-Validated Inverse Methods | FR4.203: Clouds and Precipitation IV | |

## Sponsors

The IGARSS 2008 Local Organizing Committee would like to thank all the organizations that have sponsored this event. Many of them are long-time supporters of IGARSS, and we are pleased to welcome our new supporters as well. Please take the time to visit in the exhibit area the many organizations that have helped make this symposium a success.







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## Greetings from GRSS President

Welcome to IGARSS08. The IEEE Geoscience and Remote Sensing Society's annual IGARSS Symposia are now recognised as the #1 scientific and technical remote sensing event of the year. The growing importance of remotely sensed data in providing information for the sustainable development of our planetary resources and its contribution to understanding and monitoring the impact of climatic change provide a unique backdrop for the presentation of ideas, models, instruments and the application results of our research to be provided to the wider scientific community at this Symposium.

We look forward to a collegial, information-rich and stimulating time in Boston this coming July.

Sincerely,
Tony Milne
President, IEEE Geoscience and Remote Sensing Society

## General Chairs' Welcome

***John Kerekes***
***General Co-Chair***

***Eric Miller***
***General Co-Chair***

We are pleased to welcome you to Boston for IGARSS 2008, the 28th annual symposium for GRSS! IGARSS 2008 continues the excellent tradition of gathering world-class scientists, engineers and educators engaged in the fields of geoscience and remote sensing to meet and present their latest activities. Truly an international event, over fifteen hundred participants from all over the world will enjoy a week of technical sessions, tutorials, exhibits and social activities.

We are especially excited to be hosting IGARSS'08 in Boston, a city steeped in American tradition that also is defining the future with its world-class research universities, labs and diverse industry. IGARSS'08 is taking place in the Hynes Convention Center with the host hotel, the Sheraton Boston, located adjacent to the meeting space. In addition to the many fine restaurants and shopping in the immediate vicinity of the Sheraton, you will be only a short walk from many Boston attractions including Faneuil Hall and Quincy Market, the Museum of Fine Arts, the Boston Commons, and historic Fenway Park. An easy ride on America's first subway system will deliver you to Cambridge, home to Harvard and MIT. Perhaps you were able to join in the Independence Day 4th of July celebrations which occurred just prior to IGARSS'08 and included a Boston Pops concert and fireworks exhibition on the Charles River Esplanade.

Our Technical Program Co-Chairs, Dara Entekhabi and Steve Reising, have led the coordination of a vibrant technical program encompassing traditional IGARSS topics as well as reflecting the timely theme of the 2008 symposium, "Geoscience and Remote Sensing: The Next Generation." This theme was selected to emphasize the opportunities for the next generation of remote sensing researchers and innovators specifically in the context of our next-generation challenges and global responsibilities to map, measure and monitor the Earth's environment. In this regard, we have arranged a number of special sessions and other unique opportunities for participation at IGARSS by students and educators. At IGARSS'08 we also turn our collective attention to the next generation of multi-disciplinary challenges highlighting the future of remote sensing as a discipline that is integral to fields as diverse as meteorology, geography, urban planning, oceanography, water resources and geophysics. We are especially excited to have our three plenary speakers, Drs. Susan Avery, Michael Frielich and Berrien Moore kick off IGARSS'08 with their insights and collective wisdom on these important issues. This discussion will continue throughout the week in a number of panel and special sessions led by prominent members of those communities to help build the cross-disciplinary relationships needed to address the many challenging problems facing our world in which remote sensing, geoscience and related disciplines play key roles.

As we look forward to an exciting week of activities, we would like to thank all the volunteers on our Local Organizing Committee, the members of our Technical Program Committee and the hundreds of reviewers who have helped shape IGARSS'08. Finally, we would especially like to thank Billene Mercer and her staff at Conference Management Services, Inc. for their outstanding dedication and skill in arranging the myriad details necessary for the successful management of IGARSS'08.

John Kerekes and Eric Miller

## Technical Program Overview

It is a pleasure to have been given the responsibility for organizing the IGARSS technical program. Now in its 28th year, IGARSS is the premier conference in the remote sensing field, providing a unique opportunity for world-renowned experts in geoscience and remote sensing to meet and have meaningful and enjoyable interactions.

Consistent with last year's IGARSS in Barcelona, the submission rate this year has been very high, with almost 2400 abstracts submitted. In order to maintain a high-quality technical program, abstracts were assigned to 1607 reviewers by more than 30 dedicated experts on the Technical Program Committee. An average of 3.4 reviews for each contributed abstract was received from the wider scientific and technical community. The Technical Program Committee, which includes 45 theme coordinators/session organizers and 109 invited session organizers, met in Atlanta on February 29 to organize 1885 accepted presentations to form the technical program.

The presentations at IGARSS 2008 are organized into 211 half sessions of 5 oral papers each and 99 interactive sessions of up to 12 posters each. The technical program covers the theme areas of geoscience, including studies of the land, oceans, atmosphere, and cryosphere; as well as the full extent of remote sensing topics, from electromagnetic modeling, design of sensors and missions, and advanced image/signal analysis techniques, to applications, education and policy.

In an effort to place more importance on the interactive sessions, posters will be displayed all day, from at least 9:00 to 18:30, each day from Monday through Thursday. At the conclusion of the last oral session of the day at 17:00, a dedicated session for poster presentations will be held from 17:00 to 18:30. Refreshments will be served in the poster and exhibit area, and all presenting authors are requested to be available at their posters during this time. This is expected to provide a valuable opportunity for interactions and technical discussions between presenters and other IGARSS participants.

Co-chairs of oral sessions are requested to keep the time schedule listed in the program regardless of any no-shows. The technical program includes only those presentations for which a presenting author had registered for the symposium by press time. Therefore, we expect very few no-shows, but the large number of parallel sessions necessitates keeping the time schedule strictly. In addition, the co-chairs of both oral and interactive sessions have been requested to record which specific presentations were presented. Those that are not presented at IGARSS will not be published in the proceedings that will be available on DVD and on IEEE Xplore following the symposium.

### Panel Sessions

At this IGARSS, we have introduced a new type of session that we hope will enhance the experience at the Symposium. Four panel sessions will occur at the beginning of each day from Tuesday through Friday. Each panel session consists of a small number of extended-duration oral presentations that are focused on an emerging science application of remote sensing. We invited leaders at the frontiers of these disciplines to present the talks. The response to the invitations has been overwhelming, and we are pleased to include the talks in the technical program. We encourage you to attend these morning panel sessions in Room 210 from 8:20 to 10:00 each day from Tuesday through Friday. The panel sessions titles are listed below. In the Technical Program listing you will find an abstract under each listing that motivates the choice of panel session topics.

| | |
|---|---|
| Tuesday Morning: | Numerical Weather Prediction (NWP), Radiance Data Assimilation and Ocean Synoptics |
| Wednesday Morning: | Earth Science Decadal Survey NASA Missions |
| Thursday Morning: | Human and Environmental Health |
| Friday Morning: | Baseline Climate Identification and Global Change |

### Acknowledgments

We thank the IGARSS 2008 Technical Program Committee wholeheartedly for their extensive and persistent hard work to formulate the technical program. In addition, there was overwhelming response from the community in reviewing the abstracts. We would like to thank the 1607 reviewers for their generous support. Finally, Conference Management Services (CMS, Inc.) has contributed greatly to the implementation of the IGARSS 2008 technical program. We thank the professional staff and especially applaud Lance Cotton of CMS, Inc. for his outstanding support of our work.

We wish you a productive and enjoyable experience at IGARSS 2008. Enjoy the beautiful scenery and exciting culture in and around the city of Boston, the heart of New England!

Steven C. Reising, Colorado State University and Dara Entekhabi, MIT

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Xiaowei Li
Xin Li
Xinwu Li
Zhe Li
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Le Wang
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Xingren Wu
Zhang Xiaojun
Hongjie Xie
Peng Xiu
Hanqiu Xu
Yong Xue
Yoshio Yamaguchi
Hiroya Yamano
Banghua Yan
Haowen Yan
Cunjian Yang
Kai Yang
Peng Yang
Wen Yang
Wenze Yang
Yun Yang
Zhengwei Yang
Yanjuan Yao
Lance D Yarbrough
Marta Yebra
Ali Yilmaz
Alper Yilmaz
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Taehun Yoon
Nick H Younan
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Zuojun Yu
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Ouan-Zan Zanife
Alina Zare
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Howard A Zebker
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Xubin Zeng
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Yong Zha
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Aiwu Zhang
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Chunhua Zhang
Guifang Zhang
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Jianglong Zhang
Junping Zhang
Kongwen Frank Zhang
Lifu Zhang
Peng Zhang
Qiaofeng Zhang
Qun Zhang
Xiangrong Zhang
Xiaoguo Zhang
Xiaojuan Zhang
Xiaoyang Zhang
Xin Zhang
Ying Zhang
Zhaonan Zhang
Dehua Zhao
Huijie Zhao
Wencang Zhao
Yindi Zhao
Guoqing Zhou
Jun Zhou
Qiang Zhou
Yuyu Zhou
Zheng-Shu Zhou
Jing Zhu
Jun Zhu
Wenquan Zhu
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Bin Zou
Mehrez Zribi
Raul Zurita-Milla

## Welcome to Boston

The Hynes Convention Center and the Sheraton Boston Hotel are centrally located facilities right in the heart of Boston - easily accessible from the airport, metro, and major highways and roads. No other city in America is easier to get to - or easier to get around - than Boston. Boston is within two hours of Toronto, Philadelphia, Washington D.C., Montreal, New York and Detroit. Whether you are flying into Logan International Airport, driving via major interstate highways I-90, I-95 or I-93, which are just two minutes from the Hynes Convention Center, or taking the train or bus from and to South Station, getting to Boston is convenient and stress-free. Since the completion of the Big Dig, Boston's major transportation and infrastructure project, the city features increased convenience and ease for getting anywhere you want to go.

For the historian in you, the Freedom Trail will lead you through Boston, stopping at Paul Revere's House, Old North Church, Old South Meeting House and many other sites. The Aquarium, Museum of Fine Arts and the Museum of Science are also all nearby. Duck Tours can be arranged through the hotel concierge, and some of New England's most scenic beaches are only a short drive away.

Welcoming and accessible, the Boston area is a wonderful destination for a quick getaway weekend or a several day stay. Summertime means seasonal favorites such as harbor cruises and island hopping, street festivals and window shopping, open air markets, star-studded concerts and music under the stars. Dining al fresco is another summer treat, whether you're having a five-course dinner, a light repast after a day of sightseeing or simply enjoying a cup of clam chowder and a locally brewed beer. And of course, what summer would be complete without enjoying the world-champion Red Sox playing at venerable Fenway Park? There are walking trails for big feet and little feet and tours by land or by sea. For tired feet, trolley tours take you where you want to go. You can tour with period costumed guides or take a tour with your cell phone or MP3 player. In Boston, you can blaze your own trail with total summer freedom!
Boston City Links

- http://www.bostonusa.com
- http://www.boston-online.com/visitors

May we highly recommend

- Boston Duck Tours: http://www.bostonducktours.com
  Highly rated; this is a wonderful way to see Boston.
- The Beantown Trolley: http://www.bostontours.us
- Cityview Trolley Tours: http://www.cityviewtrolleys.com

Boston Area University Tours and Points of Interest

- Massachusetts Institute of Technology (MIT): http://www.mit.edu
- Harvard University: http://www.harvard.edu
- Tufts University: http://www.tufts.edu
- Boston University: http://www.bu.edu
- Boston College: http://www.bc.edu
- Northeastern University: http://www.neu.edu
- MIT Museum: http://web.mit.edu/museum
- Edgerton Center (MIT): http://web.mit.edu/Edgerton/

## Visitor Information

The Boston Convention and Visitors Bureau will be staffing an information booth at the Hynes Convention Center Monday, July 7 through Wednesday, July 9 from 9:45 to 17:45 each day. They will have information on things to do in Boston as well as tour options for individual attendees.

## Weather Tips

In Massachusetts the summer season lasts from mid-June to the beginning of September. This is a tremendously popular time for both international and domestic travelers to visit Massachusetts. During the warm days of summer, travelers and natives alike flock to New England's popular lakes, beaches, and coast. The Atlantic Ocean will be at its warmest late in the summer, around 75°F (24°C). Back in Boston the city undergoes a sea change. Boston empties as its large student population departs for summer vacation, and the city comes alive with innumerable outdoor concerts and festivals. Music lovers take advantage of the balmy 80°F to 90°F (27°C to 32°C) degree days to sit and be serenaded at these concerts in the city's parks. In the hills and mountains of western and northern New England the temperature is a little cooler (70°F to 85°F, about 21°C to 30°C) and the entertainment options a little more unique. The Berkshires, Massachusetts' westernmost region, play host to world renowned Summer theater and serve as the seasonal home of the Boston Symphony. To the north the White and Green Mountain National Forests offer exception hiking, biking, boating and camping opportunities. In the hills the temperature at night can dip into the 50s and 60s Farenheit (10°C to 20°C).

**Airport Information**

Boston's Logan International Airport is a 20 - 30 minute drive from from the John B. Hynes Veterans Memorial Convention Center. There are several shuttle bus companies that operate from the airport, taxis are easily available, and the Massachusetts Bay Transportation Authority (MBTA) provides several public transportation options originating from the airport.

**Currency**

The U.S. monetary system includes denominations of $1, $5, $10, $20, $50, and $100 bills. There are also four common denominations of coins: 1¢ (1 cent or a penny), 5¢ (a nickel), 10¢ (a dime), 25¢ (a quarter). Two less-common types of coins are worth 50¢ and $1.

Currency exchange bureaus can be found in many banks throughout the Boston area. Hotels also offer currency exchange services, but the exchange rate is not as good as those offered at banks. It is also wise to check for currency exchange services through American Express (800) 525-7623 or http://www.americanexpress.com or visit http://travel.americanexpress.com; additionally, the Thomas Cook Currency Services are available and can be found at http://www.us.thomascook.com or by calling (800) 287-7362.

Traveler's checks are widely accepted and used as well as credit cards and ATMs (automated teller machines). The most used credit cards include Visa, MasterCard, American Express, Diners Club, Discover, and Carte Blanche. Some Boston venders may accept international cards like enRoute, Eurocard, and JCB. ATMs are available at virtually every hotel.

In Boston, 15 to 20 percent of the total bill is a good rule of thumb for tipping. Some additional guidelines follow:

- Hotel personnel: Generally tip $1 to $2 for each bag of luggage. For concierge services, a $5 tip is appropriate.
- Taxi drivers and tour guides: Taxi drivers usually receive $1 to $2 for a direct route, or follow the 15 to 20 percent rule, whichever is greater. A $1 to $2 tip per person on a tour is appropriate for tour guides.
- Valet parking and housekeeping: $2 is a good tip for a parking valet, while $2 a day is a good tip for housekeeping services.

**Taxation**

The United States has no value-added tax or other indirect tax at the national level. There is a 5% sales tax on purchases and a 12.45% tax on hotel rooms in Boston.

**Getting Around**

Public transportation around Boston is inexpensive and convenient. It is run by the Massachusetts Bay Transportation Authority. http://www.mbta.com

Riders on the subway should take the Green Line, Train D "Riverside" (avoid Train E, as it does not stop at the Hynes) to the "Hynes Convention Center" station. Then walk down Massachusetts Avenue, over the Massachusetts Turnpike, turn left on Boylston St., and on to the Hynes. Signs are posted to guide you from the train stop to the convention center. Buses 1 and 55 also share this destination.

Alternately, you could take the Green Line to the "Copley" station, then walk down Boylston St., away from Copley Square, towards the Hynes Convention Center. Buses 9, 10, 39, and 55 also share this destination.

Click here for a map showing the relative positions of the Hynes Convention Center, the Sheraton Boston, and the Subway stations in the area.

Express buses from outside cities (e.g. 502 and 503) are also available. A complete map of the Boston subway can be found at http://www.mbta.com/schedules_and_maps/subway.

Each trip on the Subway cost $2 (or $1.70 when pre-purchased on a CharlieCard) and allows travel anywhere in the Subway system. A one-ride ticket includes one free transfer to Local Bus. Consider purchasing a day or week pass. Day passes cost $9 and allow unlimited travel on Subway, Local Bus, Commuter Rail Zone 1A, and the Inner-Harbor Ferry. Week passes cost $15, are good for 7 days, and provide the same services as a day pass.

Children 11 years old and younger can ride for free with a paid adult. Junior High and High-School students ride for $0.85 per ride.

**Helpful Phone Numbers**

Emergencies: 911
John B. Hynes Veterans Memorial Convention Center: 617-954-2000
The Sheraton Boston Hotel: 617-236-2000
The Westin Copley Place: 617-262-9600

**Internet Access**

Wireless Internet access will be available throughout the Hynes Convention Center free of charge. It should show up as "Hynes Wireless" and no login names or passwords are required.

The Internet Cafe will be located in Room 200 of the Hynes Convention Center. Computers will be available for attendees to use to access the Internet during the symposium.

The Speaker Ready Room and the Oral Presentation Upload station will also be located in room 200.

Room 200 Hours:
Sunday, July 6 14:00 to 17:30
Monday, July 7 to Friday, July 11, from 8:00 to 17:30

**Registration**

The IGARSS Registration Desk will be on the Plaza Level of the Hynes Convention Center in the Hall A Prefunction Area.

Registration Desk Hours:

| | |
|---|---|
| Sunday, July 6 | 7:30 - 17:30 |
| Monday, July 7 | 7:00 - 17:30 |
| Tuesday, July 8 | 7:30 - 17:30 |
| Wednesday, July 9 | 8:00 - 17:30 |
| Thursday, July 10 | 8:00 - 17:30 |
| Friday, July 11 | 8:00 - 17:30 |

**Tutorials**

**Full-day Tutorials**
**Sunday, July 6, 08:30 - 17:30**

*FD-1: SAR Polarimetry: Basics, Processing Techniques and Applications - Hynes 104*
Presenters: Eric Pottier and Laurent Ferro-Famil, IETR UMR CNRS 6164, University of Rennes 1

Note: Tutorial FD-2 has been cancelled.

*FD-3: Semantic content extraction from high resolution EO images - Hynes 105*
Presenters: Mihai Datcu, German Aerospace Center, DLR Oberpfaffenhofen and Klaus Seidel, Swiss Federal Institute of Technology, ETH Zurich

**Half-day Tutorials**
**Sunday Morning, July 6, 08:30 - 12:30**

*HD-1: Modeling the Spectral Responses of Natural Materials under Varying Environmental Parameters: Theoretical and Practical Challenges - Hynes 107*
Presenter: Gladimir V. G. Baranoski, University of Waterloo, Canada

*HD-3: Signal and Image Processing for Remote Sensing - Hynes 108*
Presenter: C. H. Chen, University of Massachusetts Dartmouth

*HD-5: An Introduction to AGI (Advanced Geospatial Intelligence) - Hynes 109*
Presenter: Shawn A. Kalis, Riverside Research Institute

*HD-8: Interferometric Synthetic Aperture Radar (InSAR) Methods and Applications - Hynes 110*
Presenter: Howard Zebker, Stanford University

Note: Tutorial HD-9 has been cancelled.

*HD-11: Introduction to Microwave Radiometry - Hynes 111*
Presenters: R. Vincent Leslie, MIT Lincoln Laboratory and Michael J. Schwartz, Microwave Atmospheric Science Group, NASA JPL

**Sunday Afternoon, July 6, 13:30 - 17:30**

*HD-2: Feedforward Neural Networks: Theory & Applications in Atmospheric Remote Sensing - Hynes 107*
Presenter: Frederick W. Chen

*HD-4: Data Models and Information Estimation in Multichannel Radar Remote Sensing Imagery - Hynes 108*
Presenter: Carlos López-Martínez, Technical University of Catalonia (UPC)

*HD-6: SAR oil spill observation - Hynes 109*
Presenter: Maurizio Migliaccio, University of Napoli Parthenope

*HD-7: Fractal Models in Electromagnetic Scattering - Hynes 110*
Presenter: Daniele Riccio, University of Napoli Federico II

Note: Tutorial HD-10 has been cancelled.

*HD-12: Microwave Remote Sensing of Snow - Hynes 111*
Presenter: Edward J. Kim, NASA Goddard Space Flight Center

## GEOSS Workshop

*GEOSS Workshop XXII: Air Quality and Coastal Ecosystems*
Hynes Convention Center, Room 101
IGARSS 2008 pre-symposium workshop, Boston USA
6 July 2008, 8:30 - 17:00 EDT

Co-organizers:
Albin Gasiewski, David Arctur, Gary Foley, Francoise Pearlman

Background:
The Global Earth Observation System of Systems (GEOSS) is a complex system of sensors, communication devices, storage systems, computational and other devices used to observe the Earth and to gather the data needed for a better understanding of the Earth's processes. In addition, GEOSS includes models and processes to create information from the observational data. The 2003 Earth Observations Summit established the objective "to monitor continuously the state of the Earth, to increase understanding of dynamic Earth processes, to enhance prediction of the Earth system, and to further implement our international environmental treaty obligations."

The GEOSS Implementation Plan states that GEOSS will provide the overall conceptual and organizational framework for integrated global Earth observations to meet user needs. GEOSS will be a "system of systems" consisting of existing and future Earth observation systems, supplementing but not supplanting their own mandates and governance arrangements. It will provide the institutional mechanisms for ensuring the necessary level of coordination, for strengthening and supplementing existing Earth observation systems, and for reinforcing and supporting component systems in carrying out their mandates.

## Technical Meetings

*Soil Moisture Active and Passive (SMAP) Mission Information Meeting*
Sunday, July 6, 16:00 - 18:00
Gardner Room, Sheraton Boston Hotel

An open information meeting to discuss the Soil Moisture Active and Passive (SMAP) mission will be held 4:00 pm to 6:00 pm on Sunday July 6 at the Gardner Room of Sheraton Hotel. The meeting will open with brief presentations on the mission science, measurement approach and project program. The SMAP mission is the first of the Earth Science Decadal Survey missions, with a target launch date in late 2012 or early 2013. SMAP has extensive heritage in the earlier Hydros ESSP mission design.

*Frequency Allocations in Remote Sensing Technical Committee Meeting*
Monday, July 7, 17:30 - 19:00
Room 111, Hynes Convention Center

The Frequency Allocations in Remote Sensing (FARS) Technical Committee of IEEE GRSS will hold its annual meeting at IGARSS 2008. The agenda of the meeting will include
a discussion of the upcoming URSI General Assembly, the status of USNC Commission F elections, and relevant USNC meetings and new activities for the upcoming triennium. The FARS committee mission is to provide technical assessments, guidance and recommendations regarding matters of frequency sharing and interference between remote sensing and other uses of the radio wave spectrum. Both members and non-members are welcome to attend and participate in the discussion. The agenda includes an update on FARS activities, a discussion of interference concerns for new 60 GHz commercial devices, preparations for the upcoming SFCG meeting, and nominations for a committee co-chair.

*Data Fusion Technical Committee Meeting*
Tuesday, July 8, 18:00 - 19:00
Room 107, Hynes Convention Center

The Data Fusion Technical Committee (DFTC) of IEEE GRSS will hold its annual meeting at IGARSS 2008. The DFTC serves as a global, multidisciplinary network for geospatial data fusion, connecting people and resources. Its purpose is to educate students and professionals and to promote best practice in data fusion applications. In particular, the DFTC has been organizing a yearly challenge since 2006. Ideas and contributions for the organization of the future issues of the contest are welcome. Both members and non-members are welcome to attend the meeting and participate in the discussion.

*USNC-URSI Commission F Meeting*
Wednesday, July 9, 18:00 - 19:00
Room 111, Hynes Convention Center

Commission F of the U.S. National Committee (USNC) of the International Union of Radio Science (URSI) will hold a business meeting at IGARSS 2008. Both members and non-members are welcome to attend the business meeting and participate in the discussion.

*International Spaceborne Imaging Spectroscopy Working Group Meeting*
Friday, July 11, 14:00 - 17:00
Room 105, Hynes Convention Center

The International Spaceborne Imaging Spectroscopy Working Group (ISIS WG) will meet to discuss a range of programmatic and technical issues associated with current and planned imaging spectroscopy satellite missions. Current members of the working group include representatives from all major space agencies, national research bodies and associated private industry partners.

The International Spaceborne Imaging Spectroscopy Working Group (ISIS WG) will meet to discuss a range of programmatic and technical issues associated with current and planned imaging spectroscopy satellite missions. Current members of the working group include representatives from all major space agencies, national research bodies and associated private industry partners.

Goals of the ISIS WG are to share information on current and future spaceborne imaging spectroscopy (“hyperspectral”) missions, and to seek opportunities for new international partnerships to the benefit of the global user community. Specific discussions within the working group also focus on interoperability among missions, ‘best practice’ mission implementation, mass data management challenges and development of a forward work plan for improved coordination activities amongst member agencies.

Anticipated topics for this meeting are likely to include discussions about development of a series of global cal/val sites and best-practice ground measurements in support of these missions. In addition, a number of discussion papers on data standards, capacity building and spectrometer development are being drafted by members of the working group, and will be discussed in more detail during the meeting.

Observers and IGARSS 2008 participants are welcome to attend.

**Oral Presentation Instructions**

- All oral presenters must check in and load their presentations in the Speaker Ready Room (Hynes Convention Center Room 200).
- It is preferable to load all files to the IGARSS server on the day prior to the scheduled presentation. The cut-off for uploads is no less than one hour prior to the start of the session, i.e. the previous day for first morning session, 9:20 for second morning session, 12:20 for first afternoon session and 14:20 for second afternoon session.
- Each oral presentations, including questions and answers, must be less than 20 minutes in length. Due to the large number of parallel sessions, session co-chairs will follow the printed schedule strictly.
- Oral presenters are required to use the laptops provided in the presentation rooms.
- Presentation files may be created in Adobe Acrobat (.pdf) (recommended format) or Microsoft PowerPoint. Movies or animations need to be able to run using MPEG, Windows Media Player, Macromedia Flash Player, Apple QuickTime or RealPlayer (RealNetworks).
- Please note that while there will be wireless Internet access available in the presentation rooms, we cannot guarantee either connection speed or availability for your particular presentation time, and we strongly encourage you not to rely on Internet access for your presentation.

Oral Presenter file upload hours:
Sunday, July 6 14:00 to 17:30
Monday, July 7 to Friday, July 11, from 8:00 to 17:30

**Poster Presentation Instructions**

- Posters will be displayed from 9:00 to 18:30 on the day on which they are scheduled.
- Presenting authors are requested to be available at their posters from at least 17:00 to 18:30.
- Posters must be removed at the conclusion of the poster session, by 19:30 at the latest.
- Poster boards will be available along with the necessary mounting hardware.
- The poster should be not larger than 4 feet (122 cm) in height and 4 feet (122 cm) in width.

**Exhibition**

IGARSS 2008 would like to thank the following companies and organizations for exhibiting at this year's event. Please stop by the exhibit hall and visit them during exhibit hours.

| | |
|---|---|
| Booth 301: | The Aerospace Corporation<br>www.aero.org |
| Booth 501: | Alaska Satellite Facility<br>www.asf.alaska.edu/asf/ |
| Booth 307: | ARTEMIS Inc.<br>www.dustersuite.com |
| Booth 604: | Booz Allen Hamilton<br>www.boozallen.com |
| Booth 407: | Canadian Space Agency<br>www.space.gc.ca/asc/index.html |
| Booth 509: | Decagon Devices, Inc.<br>www.decagon.com |
| Booth 304: | Earth Remote Sensing Data Analysis Center (ERSDAC)<br>www.ersdac.or.jp/eng/index.E.html |
| Booth 310: | IEEE Geoscience and Remote Sensing Society<br>www.grss-ieee.org |
| Booth 403: | HyVista Corporation<br>www.hyvista.com |
| Booth 308: | IGARSS 2009<br>www.igarss09.org |
| Booth 402/404: | ITT - Visual Information Solutions<br>www.ittvis.com |
| Booth 605/606: | Japan Aerospace Exploration Agency<br>www.jaxa.jp/index_e.html |
| Booth 409: | Korea Aerospace Research Institute (KARI)<br>www.kari.re.kr |
| Booth 302: | MIT - Lincoln Laboratory<br>www.ll.mit.edu |
| Booth 408/410: | NASA - Earth Science Division<br>eospso.gsfc.nasa.gov |
| Booth 309: | National Geospatial-Intelligence Agency<br>www.nga.mil/portal/site/nga01/ |

| | |
|---|---|
| Booth NPOESS: | NPOESS - National Polar-orbiting Operational Environmental Satellite System<br>www.ipo.noaa.gov |
| Booth 503: | Orbital Systems, Ltd.<br>www.orbitalsystems.com |
| Booth 507: | PCI Geomatics<br>www.pcigeomatics.com |
| Booth 607: | PP Systems Inc.<br>www.ppsystems.com |
| Booth 303: | Raytheon Integrated Defense Systems<br>www.raytheon.com |
| Booth 508: | Rochester Institute of Technology Center for Imaging Science<br>www.cis.rit.edu |
| Booth 401: | SpecTIR, LLC<br>www.spectir.com |
| Booth 510: | USGS EROS - Landsat & the Landsat Data Continuity Mission<br>landsat.usgs.gov |
| Booth 603: | Vexcel Corporation<br>www.vexcel.com |

**Exhibit Hours:**

| | |
|---|---|
| Tuesday, July 8 | 10:00 - 19:30 (Reception 17:30-19:30) |
| Wednesday, July 9 | 10:00 - 16:00 |
| Thursday, July 10 | 10:00 - 16:00 |

**K-12 Outreach Activities**

K-12 outreach activities are taking place in the IGARSS exhibit hall. Please see page 7 of this guide for the floor plan.

**Tuesday, July 8, 2008**

*ALL DAY*

Enjoy the education and outreach exhibits located in the conference center!

*MORNING*

9:30–12:00

"Behind the Scenes" tour of the Boston Museum of Science

- Welcome by Museum Staff
- Overview of the Digital Earth Watch measuring vegetation health
- Enjoy presentations and exhibits!

*AFTERNOON*

13:30–15:00 "Mathematics of Remote Sensing" Team Competition for grades 3-5 and 6-8

13:30–17:00 IGARSS'08 & You Photoshoots: Have your photo printed on the front of the IGARSS'08 program. (open to everyone)

15:00–15:20 Refreshment Break (open to everyone)

17:00–18:30 Posters (open to everyone)

**Wednesday, July 9, 2008**

*ALL DAY*

- Education and outreach exhibits located in the conference center!
- IGARSS'08 & You Photoshoots: Have your photo printed on the front of the IGARSS'08 program.

*MORNING*

8:20–12:00 Posters

10:00–10:20 Refreshment Break

9:00–12:00 Earthzine Interviews (open to everyone)

10:30–11:00 IGARSS'08 Art Contest Students in grades 3-5, 6-8 and 9-12. Awards are presented to the winners.

*AFTERNOON*

13:20–15:00 WE3.109: Remote Sensing Education and Outreach Session, Room 109 (for teachers/adults)

13:30–17:00 Essay Contest for grades 6-8 and grades 9-12

15:00–15:20 Refreshment Break

17:00–18:30 Posters (open to everyone)

**Thursday, July 10, 2008**
*ALL DAY*
- Education and outreach exhibits located in the conference center!
- IGARSS'08 & You Photoshoots: Have your photo printed on the front of the IGARSS'08 program. (open to everyone)
- IGARSS'08 Scavenger Hunt: Grades 3-12 meet the scientists and exhibitors through a "Find and Ask" scavenger hunt for grades 3-12

*MORNING*
9:00-12:00 Forest Watch and workshops (for teachers/adults)
10:00–10:20 Refreshment Break
*AFTERNOON*
13:30–15:00 Grades 6-8 and 9-12 Essay Contest Winners Announced
15:00-15:20 Refreshment Break

**Outreach Exhibit Area**

Booth A: NOAA - Magic Planet, Jeopardy & hands-on activities
Booth B: DigiPen Institute of Technology - Eye on Earth
Booth C: MIT Lincoln Laboratory - Guess the Land Mass
Booth D: SUNY-Buffalo/RIT/CReSIS - Geowall System
Booth E: Hofstra University / Cradle of Aviation Museum
Booth F: CERSER - Thermal Infrared Temperature Measurement of Polar Ice Sheets
Booth G: CERSER - IGARSS 2008 Education and Outreach Booth
Headquarters for the IGARSS 2008 Scavenger Hunt &
the IGARSS 2008 and You Photoshoots

**Outreach Exhibit Hours:**
Tuesday, July 8 10:00 - 19:30 (Reception 17:30-19:30)
Wednesday, July 9 10:00 - 16:00
Thursday, July 10 10:00 - 16:00

**Social Events**

**Welcome Reception - Prudential Tower Skywalk**
**Sunday, July 6, 17:30 - 20:30**

The IGARSS Opening Reception will take place at the Prudential Skywalk – one of the most dramatic venues in New England. The Skywalk is atop the 52-story Prudential Tower right in the middle of Boston. The observatory gives visitors a birds-eye view, making it the perfect vantage point to view the bustling city below. With 360 degrees of floor-to-ceiling windows, the Skywalk affords spectacular sights of the entire Boston area, and, on a clear summer day, the mountains of New Hampshire and even Cape Cod. The Opening Reception will feature hors d'oeuvres and refreshments. Hot and cold passed appetizers and reception food displays -- with typical New England flavors -- will be available for your enjoyment.

The Prudential Center comprises the "Pru Tower", which is the second tallest building in Boston, along with the City Under Glass Mall, which includes several restaurants and numerous shops. The Prudential Center is connected to the Hynes Convention Center IGARSS symposium site and the Sheraton Boston Hotel.

**Exhibitor Reception - IGARSS Exhibit Hall**
**Tuesday, July 8, 17:30 - 19:30**

Enjoy light hors d'oeuvres and refreshments as you visit with our exhibitors.

**Soccer Game - MIT Soccer Field**
**Wednesday, July 9, 18:00 - 20:30**

The traditional IGARSS soccer game will be held on MIT's soccer field, Wednesday, July 9 at 18:00. There is no cost, but registration is required. Transportation to the field will be provided. Bus pickup / dropoff at the Boylston entrance of the Hynes Convention Center.

**Technical Committee and Chapter Chairs Dinner - Commonwealth Room, Boston Sheraton Hotel**
**Wednesday, July 9, 19:30 - 22:00**

This event provides a venue for discussion of GRSS Technical Committee and Chapter activities accompanied by a fine meal. Members of GRSS Technical Committees and GRSS Chapter Chairs are especially invited, but all IGARSS delegates (and guests) are welcome to participate. This is an excellent opportunity to learn more about the technical committees and activities of our chapters. Tickets are limited so sign up early.

**Awards Banquet - Peabody Essex Museum, Salem, MA**
**Thursday, July 10, 18:00**

This year's IGARSS banquet will take place in the Peabody Essex Museum, 16 miles north of Boston in historic Salem, Massachusetts.

Buses will transport guests from the Sheraton Boston Hotel to the ferry dock on Boston Harbor, where we will board a dedicated ferry to Salem. The boat will sail through Boston Harbor, north past Logan Airport, Nahant, Marblehead, and into Salem Harbor. Often referred to America's Bewitched Seaport, Salem has a long witch-related history, and is the site of the House of Seven Gables. The one-half mile walk from the ferry dock, through the center of the quaint city, to the Peabody Essex Museum gives one a good sense of colonial America. Buses will be available for those preferring not to stroll.

The Peabody Essex Museum (PEM) is America's oldest continuously operating museum, founded in 1799, a decade and a half after American independence. The PEM is 75 years older than Boston's Museum of Fine Arts and the New York Metropolitan Museum of Art. The collections come from America's first traders, filled with the entrepreneurial spirit that made this country what it is. Many of the museum's 2.4 million collected works of art and culture are the best of their kind. Several of the exhibit rooms will be available for viewing before and after dinner.

The scrumptious banquet will take place in the Atrium of the modern museum building. Light entertainment will be provided during dinner by a university a cappella singing group, and of course, awards will be presented.

Entertainment will be provided by The Nor*easters A Cappella Singing Group. The Nor*easters are the oldest a cappella group at Northeastern University. Although the student members love to show off and have fun, their voices together create some beautiful tunes. From hip hop to the oldies, there are no limits to what kind of music these friends take on. During each performance, the Nor*easters hope their audiences see not only how dedicated they are to the world of a cappella, but also how much fun and excitement music brings to their lives.

The return trip will be either by ferry or bus, back to the Sheraton Boston Hotel.

*Summary of the evening's schedule:*
*18:00* Bus depart from the Sheraton Boston Hotel, Dalton Street Entrance.
*18:45* *Ferry transport from Boston to Salem*
*19:30* *Arrive Salem*
*22:30* *Depart Salem*
*23:15* *Arrive Boston*

**Technical Tour**

**Visit to Woods Hole Oceanographic Institution and Related Organizations**

This tour will visit some of the research organizations in Woods Hole, MA on Cape Cod.

The tour starts at the Woods Hole Oceanographic Institution's Exhibit Center (WHOI), which has exhibits and videos on the institute's ocean science research, vessels, and tools. James Yoder, WHOI VP for Academic Programs and Dean, will give a presentation on a National Research Council report entitled, "Earth Observations From Space: The First 50 Years of Scientific Achievements."

Next, the tour will go to the Woods Hole Science Center (WHSC) which is the U.S. Geological Survey's facility at Woods Hole. There will be a demonstration of the GeoWall system that will feature some of WHSC's latest data, e.g., Puerto Rico trench. Also, there will be a brief tour of the WHSC facility (Quissett Campus).

The final technical aspect of the tour will be a visit to the Woods Hole Research Center (WHRC) at the Gilman Ordway Campus. There will be a brief tour of the WHRC's cutting-edge building that was specially designed to have environmentally-friendly materials and to use energy and water efficiently. Demonstrations will include work using ALOS radar data (PALSAR) to map tropical forest change and biomass and satellite observations (AVHRR) to map forest productivity in the circumpolar region.

The tour will return to Woods Hole, MA for dinner before returning to Boston. Dinner will not be provided, but a bag lunch will be offered before boarding the bus. The tour will leave at 11:00 on Wednesday, July 9, and return around 21:00 that evening. The one-way trip from Boston to Woods Hole will take approximately an hour and a half. Bus pickup / dropoff at the Boylston entrance of the Hynes Convention Center.

*Summary*
*Depart:* *Hynes Convention Center, Wednesday, July 9, 11:00*
*Return:* *Hynes Convention Center, approx. 21:00, after dinner at Woods Hole Village*
*Cost:* *Tour is sold out.*

## Student Activities

**Career Forum - Commonwealth Room, Sheraton Boston Hotel**
**Monday, July 7, 17:30 - 19:30**

IGARSS 2008 offers students the unique opportunity to interact with a number of representatives of companies in geosciences and remote sensing. Registering and attending the Career Forum allows you to:

- attend short (5-10 minute) presentations on career opportunities from sponsors of the Career Forum
- network with representatives of companies and learn more about their employment opportunities
- submit your resume to company representatives
- seek potential interviews
- have your contact information shared with potential employers during the symposium

This event is available by registration only to students, and only a limited number of registrants will be accepted. If you are looking for employment, do not forget to register for this event! Come to the meeting armed with questions and resumes!

Participating Organizations:

### BALL AEROSPACE

Ball Aerospace is a leader in design, development and manufacture of innovative aerospace systems. We produce spacecraft, instruments and sensors, RF and microwave technologies, data exploitation solutions and a variety of advanced aerospace technologies and products that enable exciting missions. We are known for our contributions in support of space and Earth science, exploration, national security and intelligence programs. We were also a pioneer in the development of the commercial remote sensing market, producing imaging systems and spacecraft that helped spawn a new market-driven demand for imagery. Our projects offer some of the most difficult and exciting challenges in aerospace. We employ approximately 3,000 talented engineers, scientists, technicians and support staff. And one of the keys to our success is our people. Our employees take great pride in their contributions to better understanding our planet and protecting the nation.

### AIR FORCE RESEARCH LABORATORY

Mission
AFRL's mission is leading the discovery, development and integration of affordable warfighting technologies for America's aerospace forces. It is a full-spectrum laboratory, responsible for planning and executing the Air Force' science and technology program. AFRL leads a worldwide government, industry and academia partnership in the discovery, development and delivery of a wide range of revolutionary technology. The laboratory provides leading-edge warfighting capabilities keeping our air, space and cyberspace forces the world's best.

Space Vehicles Directorate
With headquarters at Kirtland AFB, N.M. and an additional research facility at Hanscom AFB, Mass., the directorate serves as the Air Force's "Center of Excellence" for space research and development. It also leverages commercial, civil and other government resources that ensure America's defense advantage. Primary focus areas include: radiation hardened electronics; space power; space structures and control; space based sensing; space environmental effects; autonomous maneuvering; and balloon and satellite flight experiments.

### RAYTHEON COMPANY

Raytheon Company, with 2007 sales of $21.3 billion, is a technology leader specializing in defense, homeland security and other government markets throughout the world. With a history of innovation spanning more than 85 years, Raytheon provides state-of-the-art electronics, mission systems integration and other capabilities in the areas of sensing; effects; and command, control, communications and intelligence systems, as well as a broad range of mission support services. With headquarters in Waltham, Mass., Raytheon employs 72,000 people worldwide.

Integrated Defense Systems (IDS) is Raytheon's leader in Joint Battlespace Integration providing affordable, integrated solutions to a broad international and domestic customer base, including the U.S. Missile Defense Agency, the U.S. Armed Forces and the Department of Homeland Security. Headquartered in Tewksbury, MA, IDS employs more than 13,500 people worldwide and generated $4.7 billion in 2007 sales.
We are looking for the best talent, please visit our jobs website at rayjobs.com and apply to a position that best suits your requirements.

**ITT**

ITT Visual Information Solutions
ITT Space Systems Division

The hallmarks of working at ITT Corporation are Real Jobs, Real Responsibilities and Real Challenges. We offer career opportunities that are demanding and rewarding in our Space Systems Division in Rochester, NY, as well as our Visual Information Solutions in Boulder, CO. ITT is a unique company, providing the ideal workplace environment in which to foster a rewarding career. We are looking for team players with the talent and drive for excellence.

**Young Professionals' Luncheon - Gardner Room, Sheraton Boston Hotel**
**Tuesday, July 8, 12:00 - 14:00**

As part of the student activities, IGARSS 2008 is organizing a "Young Professionals" luncheon. The event is open to IGARSS student registrants. Only a very limited number of tickets will be available. The luncheon will provide a forum for discussion between current students and Graduates of the Last Decade (GOLD) members on career paths, skill sets beneficial to secure employment in the geosciences and remote sensing industries, as well as professional development opportunities. Organized for the first time as part of IGARSS, the event will allow current and future GOLD IEEE members to network in an informal setting.

**Student Paper Prize Competition**

All IEEE student members were invited and encouraged to enter the IGARSS Student Paper Prize Competition. Ten finalists have been selected by a committee to present their papers during a special session at the symposium in Boston. Three prizes will be presented: First Prize (Mikio Takagi Student Prize) US$500, Second Prize US$300, Third Prize US$200, plus certificates for each. Following the special session at IGARSS, a complimentary ticket to the GRSS Annual Awards Banquet will be given to all ten finalists. The ten finalists are listed below (the finalist's name and affiliation are underlined on each paper):

TU1.103.1: MULTIPLE-WINDOW ANOMALY DETECTION FOR HYPERSPECTRAL IMAGERY
Wei-Min Liu; Univ. of Maryland, Baltimore County
Chein-I Chang; Univ. of Maryland, Baltimore County

TU1.103.2: MULTIPLE KERNEL DISCRIMINANT ANALYSIS AND DECISION FUSION FOR ROBUST SUB-PIXEL HYPERSPECTRAL TARGET RECOGNITION
Saurabh Prasad; Mississippi State University
Lori Bruce; Mississippi State University

TU1.103.3: RETRIEVAL OF 3-D WATER VAPOR FIELD USING A NETWORK OF SCANNING COMPACT MICROWAVE RADIOMETERS
Sharmila Padmanabhan; Colorado State University
Steven Reising; Colorado State University
Jothiram Vivekanandan; National Center for Atmospheric Research

TU1.103.4: LOW FREQUENCY SEA AND ICE SHEET IMPULSE RESPONSES ACQUIRED BY THE GLOBAL ICE SHEET MAPPING ORBITER (GISMO) DEMONSTRATOR
Noppasin Niamsuwan; The Ohio State University
Joel Johnson; The Ohio State University

TU1.103.5: TOWARD AN OPERATIONAL METHOD FOR REFINED SNOW CHARACTERIZATION USING DUAL-POLARIZATION C-BAND SAR DATA
Nicolas Longepe; University of Rennes 1
Sophie Allain; University of Rennes 1
Eric Pottier; University of Rennes 1

TU2.103.1: A NOVEL STRATEGY FOR RADAR IMAGING BASED ON COMPRESSIVE SENSING
Marivi Tello; Universitat Politecnica de Catalunya
Paco López-Dekker; Universitat Politecnica de Catalunya
Jordi J. Mallorqui; Universitat Politecnica de Catalunya

TU2.103.2: VOLUME COHERENCE ESTIMATION FOR RANDOM FOREST HEIGHT RETRIEVAL BASED ON POLINSAR DATA
Tao Xiong; Tsinghua University
Guangyi Zhou; Tsinghua University
Jian Yang; Tsinghua University
Weijie Zhang; Tsinghua University

TU2.103.3: INVESTIGATION OF A NEW MULTIFUNCTIONAL HIGH PERFORMANCE SAR SYSTEM CONCEPT EXPLOITING MIMO TECHNOLOGY
Junghyo Kim; University of Karlsruhe
Werner Wiesbeck; University of Karlsruhe

TU2.103.4: ON THE USE OF DUAL-POLARIZED SAR DATA FOR OIL SPILL OBSERVATION WITH AND WITHOUT SURFACE SLICKS
Ferdinando Nunziata; Università degli Studi di Napoli Parthenope
Attilio Gambardella; Università degli Studi di Napoli Parthenope
Maurizio Migliaccio; Università degli Studi di Napoli Parthenope

TU2.103.5: ENHANCEMENT OF ALONG-TRACK INTERFEROMETRY FOR GROUND MOVING TARGET INDICATION
Robert Kohlleppel; Forschungsgesellschaft für Angewandte Naturwissenschaften e.V.
Christoph H. Gierull; Forschungsgesellschaft für Angewandte Naturwissenschaften e.V.

**Awards**

The IEEE GRS-S and IGARSS 2008 recognize the following individuals for their contributions to the field of remote sensing. Their awards will be presented during the opening session on Monday, July 7.

2008 IEEE Fellows:
Curt H. Davis
Joel Tidmore Johnson
David G. Long
Didier H. Massonnet
Jay S Pearlman
Waymond R. Scott

2008 IEEE GRS-S Distinguished Achievement Award:
Leung Tsang

2008 2008 IEEE GRS-S Outstanding Service Award:
Wooil M. Moon

2008 IEEE GRS-S Education Award:
Yoshio Yamaguchi

2008 IEEE Electromagnetics Award:
Werner Wiesbeck

**IEEE GRSS Membership**

Why should I become a GRSS Member:
I would like to encourage you to join GRSS if you are not a member. In the following, I enumerate the advantages and benefits of being a member. Advantages and Benefits of Being a Member of the IEEE Geoscience and Remote Sensing Society:

1. You can make a bigger impact on Remote Sensing through the Society. With the Earth Observing System (EOS) satellites in orbit, the upcoming National Polar Orbiting Operational environmental Satellite System (NPOESS), Earth System Science Pathfinder (ESSP) etc., remote sensing will play increasingly important roles in solutions to environmental problems, the study of global climate change and the monitoring of natural disasters. We are a transnational society. Our Society is a member of the International Group on Earth Observations (GEO). In 2005, we held two IEEE GEOSS Workshops, in Seoul and in South Africa. . In view of 9/11 and the on-going war in Iraq, subsurface sensing and foliage penetration problems have emerged as important tools for de-mining and target detection. We see great strides in remote sensing instrumentation, data processing, and applications. The IEEE-GRS Society is one of IEEE's fastest growing societies. The Society strives to address remote sensing policies and research directions. By being a member, you can be a part of this important voice. You can make a bigger impact on these issues.

2. You can readily access our two premier journals: the IEEE Transactions on Geoscience and Remote Sensing and the IEEE Geoscience and Remote Sensing Letters. Our Society's archival publications represent the forefront of remote sensing science, technology and applications. The Transactions are among the premier journals in IEEE as well as remote sensing journals in terms of citation index and impact factor. Members can access the latest issues either on-line or via hard copies in the mail.

3. You can participate in our five Technical Committees: They are Instrumentation and Future Technologies, Data Archives and Distribution, Data Fusion, Frequency Allocations in Remote Sensing and Remote Sensing Applications. The technical committees work together to review the state of art of technology in these research areas. The Technical Committees make important impacts on the future directions of remote sensing

technologies. You can be a member and participate in this process.

4. You can attend IGARSS at a reduced rate and also participate in the planning of IGARSS. Our annual international symposium IGARSS reports on the recent advances in remote sensing. The IGARSS attendance continues to increase. More than 1200 persons attended each of IGARSS 2005 in Seoul, IGARSS 2006 in Denver and IGARSS 2007 in Barcelona. Members are entitled to reduced registration fees. You can also help in the planning of IGARSS. If you are an expert in the technical topics of Applications of Remote Sensing, Mission and Programs, Geoscience Modeling and Processing, Data Processing and Algorithms, Electromagnetic Problems, Instrumentation and Techniques, Policy, you may be asked to serve on the Technical Program Committee. You can also volunteer to organize special sessions.

5. You can utilize the Resources provided by the Society, such as Education, Industrial Relations and current state-of-the-art information of the IEEE GRSS (http://www.grss-ieee.org/). The Society spends a lot of efforts in remote sensing education initiatives, development and collection of educational resources for K-12, college/graduate education as well as continuing education for professionals. Members can access these resources. We are strengthening our industry relations program. As a member, you can connect to our industrial partners via this initiative.

6. Other benefits of IEEE Members include subscription to IEEE journals in fields related to remote sensing, career and employment resources, and favorable rates in IEEE insurance programs. They are listed in http://www.ieee.org/portal/index.jsp?pageID=corp_level1&path=membership&file=benefits.xml&xsl=generic.xsl

In the meantime, if you have suggestions concerning the Society, please do not hesitate to let me know.

Sincerely yours,

Anthony Milne
President
IEEE-GRSS
Phone: 61-2-9385 8097; 61-2-9451-4628
t.milne@unsw.edu.au

Membership Options

Membership is open to professionals and students with varying levels of academic accomplishment and work experience.

Full Membership is available to those professionals that have demonstrated competence in an IEEE field. To apply, complete a Member Application Form and select GRSS as an additional Society Membership.

A Student Member must carry at least 50% of a normal, full-time academic program as a registered undergraduate or graduate student in a regular course of study in IEEE designated fields. Student Member fees are extremely low, and benefits are equal to those of Member grade. To apply, complete a Student Member Application Form and select GRSS as an additional Society Membership.

Affiliate Membership is available to those professionals who seek to affiliate themselves with GRSS but do not seek IEEE membership. Affiliates of GRSS enjoy full benefits of the Society, including monthly, on-line access to the Transactions on Geoscience and Remote Sensing, Geoscience and Remote Sensing Letters, Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS), as well as the quarterly GRSS Newsletter and reduced symposium fees. To apply, complete an Affiliate Member Application Form.

Membership Fees

GRSS Memberships include on-line access through IEEE Xplore to the Transactions on Geoscience and Remote Sensing (TGRS), Geoscience and Remote Sensing Letters (GRSL) and Journal of Selected Topics in Applied Earth Observations and Remote Sensing (J-STARS), a new journal starting in 2008. Also new, on-line access through IEEE Xplore to all IGARSS Proceedings and selected GRSS-sponsored small symposia is available to Members for an additional fee of only $4. If you would like to receive printed copies of TGRS, GRSL or J-STARS, you must indicate so on your application form and pay the additional fee(s) of $50, $28, or $30, respectively. These options are available only for Full-Year memberships. The table below is a summary of IEEE and Society Dues.

- To calculate total dues, you may elect to add the optional printed TGRS, GRSL or J-STARS fee to appropriate IEEE member fee. (Affiliates select appropriate GRSS Affiliate fee only—no IEEE Member fees will be assessed.)

- Applications received between 16 August and 28 February will be processed as Full-Year memberships. Services begin immediately.
- Applications received between 1 March and 15 August will be processed as Half-Year memberships expiring 31 December of that calendar year.

| Residence | IEEE GRSS Member | IEEE GRSS Member | IEEE GRSS Student | IEEE GRSS Student | GRSS Affiliate | GRSS Affiliate | |
|---|---|---|---|---|---|---|---|
| | Full year | Half year | Full Year | Half Year | Full Year | Half Year | |
| United States | $185.00 | $92.50 | $40.00 | $20.00 | $83.00 | $41.50 | |
| Canada (incl. GST) | $172.56 | $86.28 | $41.80 | $20.90 | $83.00 | $41.50 | |
| Canada (incl. HST) | $182.64 | $91.32 | $44.20 | $22.10 | $83.00 | $41.50 | |
| Africa, Europe, Middle East | $157.00 | $78.50 | $35.00 | $17.50 | $83.00 | $41.50 | |
| Latin America | $150.00 | $75.50 | $35.00 | $17.50 | $83.00 | $41.50 | |
| Asia, Pacific | $151.00 | $75.50 | $35.00 | $17.50 | $83.00 | $41.50 | |

| Residence | GRSS Conference Digital Library | Printed TGRS (Members) | Printed GRSL (Members) | Printed J-STARS (Members) | Printed TGRS (Students) | Printed GRSL (Students) | Printed J-STARS (Students) |
|---|---|---|---|---|---|---|---|
| | | Full Year only | Full Year only | Full Year only | Full Year only | Full Year only | Full Year only |
| United States | $4.00 | $50.00 | $28.00 | $30.00 | $25.00 | $14.00 | $15.00 |
| Canada (incl. GST) | $4.00 | $50.00 | $28.00 | $30.00 | $25.00 | $14.00 | $15.00 |
| Canada (incl. HST) | $4.00 | $50.00 | $28.00 | $30.00 | $25.00 | $14.00 | $15.00 |
| Africa, Europe, Middle East | $4.00 | $50.00 | $28.00 | $30.00 | $25.00 | $14.00 | $15.00 |
| Latin America | $4.00 | $50.00 | $28.00 | $30.00 | $25.00 | $14.00 | $15.00 |
| Asia, Pacific | $4.00 | $50.00 | $28.00 | $30.00 | $25.00 | $14.00 | $15.00 |

## IEEE GRSS Chapters

| Chapter Location | Societies Joint with | Chapter Chair | E-mail Address |
|---|---|---|---|
| **Region 1: Northeastern USA** | | | |
| Boston Section, MA | GRS | William Blackwell | wjb@ll.mit.edu |
| Springfield Section, MA | AP, MTT, ED, GRS, LEO | Paul Siqueira | siqueira@ecs.umass.edu |
| Western New York | GRS | John Kerekes | kerekes@cis.rit.edu |
| **Region 2: Eastern USA** | | | |
| Washington DC/ Northern VA area | GRS | James Tilton | j.tilton@ieee.org |
| **Region 3: Southeastern USA** | | | |
| Atlanta Section, GA | AES, GRS | Greg Showman | greg.showman@gtri.gatech.edu |
| Eastern North Carolina Section | GRS | Linda Hayden | haydenl@mindspring.com |
| **Region 4: Central USA** | | | |
| Southeastern Michigan Section | GRS | Mahta Moghaddam | mmoghadd@eecs.umich.edu |
| **Region 5: Southwestern USA** | | | |
| Denver Section, CO | AP, MTT, GRS | Michael Janezic | janezic@boulder.nist.gov |
| Houston Section, TX | AP, MTT, GRS, LEO | Christi Madsen | cmadsen@ee.tamu.edu |

| | | | |
|---|---|---|---|
| **Region 7: Canada** | | | |
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| **Region 10: Asia and Pacific** | | | |
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| Japan Council | GRS | Motoyuki Sato | sato@cneas.tohoku.ac.jp |
| Taipei | GRS | Kun-Shan Chen | dkschen@csrsr.ncu.edu.tw |

**Future IGARSS Symposia**

IGARSS'09 Cape Town, South Africa - July 13-17
*Chair: Harold Annegarn*
IGARSS'10 Honolulu, Hawaii, USA
*Co-Chairs: Karen M. St. Germain, Paul Smits*
IGARSS'11 Sendai, Japan
IGARSS'12 To Be Announced
IGARSS'13 Melbourne, Australia

## Opening and Plenary Agenda

**Opening Session**
**Hynes Auditorium**

08:45 - 09:00 **Welcome to IGARSS'08**
Dr. John Kerekes, General Co-Chair
Dr. Eric Miller, General Co-Chair

09:00 - 09:10 **Welcome to Boston**
Ian A. Bowles, Secretary of Energy and Environmental Affairs, Commonwealth of Massachusetts

09:10 - 09:25 **Welcome from the IEEE GRS Society**
Dr. Anthony Milne, President

09:25 - 09:40 **IEEE Address**
Dr. John Vig, 2009 IEEE President and CEO

09:40 - 10:10 **Major Awards and Recognitions**
Prof. Werner Wiesbeck, GRS-S Awards Chair
Dr. John Vig, 2009 IEEE President and CEO
*2008 IEEE Fellows:*
**Curt H. Davis**
**Joel Tidmore Johnson**
**David G. Long**
**Didier H. Massonnet**
**Jay S Pearlman**
**Waymond R. Scott**
*2008 IEEE GRS-S Distinguished Achievement Award*
**Leung Tsang**
*2008 IEEE GRS-S Oustanding Service Award*
**Wooil M. Moon**
*2008 IEEE GRS-S Education Award*
**Yoshio Yamaguchi**
*2008 IEEE Electromagnetics Award*
**Werner Wiesbeck**

10:10 - 10:30 Break

**Plenary Session**
**Hynes Auditorium**

10:30 - 10:55 **Penetrating Neptune's Realm**
Dr. Susan Avery, President and Director, Woods Hole Oceanographic Institution

10:55 - 11:20 **Earth Sciences at NASA: Accomplishments, Plans, and Challenges**
Dr. Michael Freilich, Director, Earth Science Division, Science Mission Directorate, National Aeronautics and Space Administration

11:20 - 11:45 **Earth Science: Time Present is the Future**
Dr. Berrien Moore, Executive Director, Climate Central

11:45 - 12:00 **IGARSS'08 Technical Program**
Dr. Dara Entekhabi, Technical Program Co-Chair
Dr. Steven Reising, Technical Program Co-Chair

## Paper Identifiers

| Example: | TU | 4 | . | 107 | . | 4 |
|---|---|---|---|---|---|---|
| **Meaning:** | **Day** | **Time Block** | **Separator** | **Room** | **Separator** | **Sequence** |

### Day

MO.....Monday, July 7
TU.....Tuesday, July 8
WE.....Wednesday, July 9
TH.....Thursday, July 10
FR.....Friday, July 11

### Time Block

1.....First Morning Session..... 08:20 - 10:00
2.....Second Morning Session ..... 10:20 - 12:00
3.....First Afternoon Session ..... 13:20 - 15:00
4.....Second Afternoon Session ..... 15:20 - 17:00
P .....Poster Session ..... 17:00 - 18:30
.....Note: Posters will be up all day; authors will be present 17:00 - 18:30.

### Room

Oral.....Hynes Convention Center Rooms 101-111, 203, and 210.
Poster .....Poster Areas A-Z and AA-EE.

### Sequence

Oral.....Order of presentation.
Poster .....Board number (Complete poster board identifier is the Room plus the Sequence.)

## MO3.101: Monday, July 7, 13:20 - 15:00

**MO3.101** **Mapping Subsurface Geology in Arid Regions using Radar**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 101
Co-Chairs: Philippe Paillou and Bruce Campbell

13:20
**MO3.101.1** **70-CM RADAR PROBING OF THE MOON: A NEW VIEW BELOW THE SURFACE**
*Bruce Campbell, Donald Campbell, Lynn Carter, Rebecca Ghent*

13:40
**MO3.101.2** **MAPPING BURIED AND EXPOSED LAVA FLOWS IN ARID VOLCANIC TERRAINS USING POLARIMETRIC AND MULTIPLE FREQUENCIES SAR AND GPR**
*Essam Heggy, Kozin Wada, Shuhab Khan, Thomas Staudacher, Edouard Kaminski, Taoufik Gabsi, Philippe Lognonné, Steve Tait, Alain Bonneville, Jean Christophe Komorowski, Satoshi Fujiwara, Josephine Boisson, Nicolas Villeneuve, Marius Necsoiu*

14:00
**MO3.101.3** **PHASE DIFFERENCES IN LONGER WAVELENGTH POLARIMETRIC SAR - SURFACE OR SUBSURFACE EFFECTS?**
*Anthony Freeman, Philippe Paillou, Yannick Lasne, Bruce Campbell, Kyle McDonald, Tom Farr*

14:20
**MO3.101.4** **MAPPING WATER BASINS IN THE EASTERN SAHARA BY SRTM DATA**
*Eman Ghoneim, Farouk El-Baz*

14:40
**MO3.101.5** **A PALSAR MOSAIC OF SAHARA TO MAP SUBSURFACE GEOLOGY**
*Philippe Paillou, Tom Farr, Ake Rosenqvist, Sylvia Lopez*

## MO3.102: Monday, July 7, 13:20 - 15:00

**MO3.102** **RADARSAT**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 102
Co-Chairs: Shabeer Ahmed and Tom Lukowski

13:20
**MO3.102.1** **TWELVE YEARS OF RADARSAT-1 CALIBRATION: OPERATIONS EXPERIENCE AND LESSONS LEARNED**
*Stephane Cote, Satish Srivastava, Robert Hawkins*

13:40
**MO3.102.2** **CAPABILITIES OF RADARSAT-2 AND USE BY THE CANADIAN GOVERNMENT**
*Luc Brûlé, Daniel De Lisle, Jill Smyth*

14:00
**MO3.102.3** **INITIAL EVALUATION OF RADARSAT-2 FOR OPERATIONAL SEA ICE MONITORING**
*Dean Flett, Roger De Abreu, Matt Arkett, Marie-France Gauthier*

14:20
**MO3.102.4** **RADARSAT-2 MOVING OBJECT DETECTION EXPERIMENT (MODEX)**
*Shen Chiu, Chuck Livingstone, Ishuwa Sikaneta, Christoph H. Gierull, Pete Beaulne*

14:40
**MO3.102.5** **RADARSAT-2 APPLICATIONS POTENTIAL FOR CANADA AND APPLICATIONS DEVELPOMENT SUPPORT PROGRAMS**
*Daniel De Lisle, Jill Smyth, Wendy Branson*

## MO3.103: Monday, July 7, 13:20 - 15:00

**MO3.103** **ALOS in 2008 II**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 103
Co-Chairs: M. Shimada and Ridha Touzi

13:20
**MO3.103.1** **PALSAR CALVAL AND GENERATION OF THE CONTINENT SCALE MOSAIC PRODUCTS FOR KYOTO AND CARBON PROJECT**
*Masanobu Shimada, Osamu Isoguchi, Ake Rosenqvist*

13:40
**MO3.103.2** **POLARIMETRIC PALSAR SYSTEM MODEL ASSESSMENT AND CALIBRATION**
*Ridha Touzi, Masanobu Shimada, Stefan Nedelcu*

14:00
**MO3.103.3** **CALIBRATION OF ALOS/PALSAR POLARIMETRIC DATA USING POLARIZATION ORIENTATION**
*Hiroshi Kimura*

14:20
**MO3.103.4** **POLARIZATION DEPENDENCE OF L-BAND MEASUREMENTS OVER THE OCEAN ON SURFACE WIND AT 23-25 INCIDENCE ANGLES**
*Osamu Isoguchi, Masanobu Shimada*

14:40
**MO3.103.5** **NEW EYES IN THE SKY: CLOUD-FREE TROPICAL FOREST MONITORING FOR REDD WITH ALOS/PALSAR**
*Josef Kellndorfer, Wayne Walker, Claudia Stickler, Katie Kirsch, Masanobu Shimada, Ake Rosenqvist, Daniel Nepstad, Paul Lefebvre*

## MO3.104: Monday, July 7, 13:20 - 15:00

**MO3.104** **Crop and Forest Monitoring with Microwave Radiometric Sensors I**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 104
Co-Chairs: Simonetta Paloscia and Peggy O'Neill

13:20
**MO3.104.1** **MODELING THE MULTIFREQUENCY EMISSION OF FORESTS AND THEIR COMPONENTS**
*Andrea Della Vecchia, Paolo Ferrazzoli, Leila Guerriero, Rachid Rahmoune, Simonetta Paloscia, Simone Pettinato, Emanuele Santi*

13:40
**MO3.104.2** **FOREST CANOPY EFFECTS ON THE ESTIMATION OF SOIL MOISTURE AT L-BAND**
*Mehmet Kurum, Roger Lang, Peggy O'Neill, Alicia Joseph, Michael Cosh, Thomas Jackson*

14:00
**MO3.104.3** **MICROWAVE SOIL MOISTURE RETRIEVAL UNDER TREES**
*Peggy O'Neill, Roger Lang, Mehmet Kurum, Alicia Joseph, Thomas Jackson, Michael Cosh*

14:20
**MO3.104.4** **L-BAND MICROWAVE EMISSION OF SOIL, LITTER AND GRASS LAYERS UNDERNEATH A FOREST CANOPY**
*Jennifer Grant, Mike Schwank, Jean-Pierre Wigneron, Adriaan Van de Griend*

14:40
**MO3.104.5** **MICROWAVE EMISSION FROM FORESTED AREAS BY USING MICROWAVE AMSR-E AND GROUND-BASED DATA**
*Simonetta Paloscia, Marco Brogioni, Giovanni Macelloni, Paolo Pampaloni, Simone Pettinato, Emanuele Santi*

## MO3.105: Monday, July 7, 13:20 - 15:00

**MO3.105** **Remote Sensing Applications to Archaeology I**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 105
Co-Chairs: Ronald G. Blom and Douglas Comer

13:20
**MO3.105.1** **WIDE-AREA, PLANNING LEVEL ARCHAEOLOGICAL SURVEYS USING SAR AND MULTISPECTRAL IMAGES**
*Douglas Comer*

13:40
**MO3.105.2** **SATELLITE OBSERVATIONS OF ARCHAEOASTRONOMICAL STRUCTURES AT NABTA PLAYA, EGYPT**
*Paul Rosen, Thomas Brophy, Masanobu Shimada*

14:00
**MO3.105.3** **THE APPLICATION OF REMOTE SENSING TECHNOLOGY IN THE ARCHAEOLOGICAL STUDY OF THE SEGMENT OF GRAND CANAL IN SHANDONG PROVINCE**
*Feng Mao, Qiang Li, Jianxi Huang, Zhihua Tang, Wensheng Zhou, Ze Liu*

14:20
**MO3.105.4** **SENSING WHAT LIES BENEATH: CANOPY REFLECTANCE AS AN INDICATOR OF ANCIENT SETTLEMENT**
*William Saturno*

14:40
**MO3.105.5** **THE ANALYSIS OF AGRARIAN-BASED LOW-DENSITY URBANISM AND THE ROLE OF REMOTE SENSING**
*Roland Fletcher*

## MO3.107: Monday, July 7, 13:20 - 15:00

**MO3.107** **Frontiers for Classification of Hyperspectral Data I**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 107
Co-Chairs: Melba Crawford and Jocelyn Chanussot

13:20
**MO3.107.1** **AN EFFICIENT ACTIVE LEARNING ALGORITHM WITH KNOWLEDGE TRANSFER FOR HYPERSPECTRAL REMOTE SENSING DATA**
*Goo Jun, Joydeep Ghosh*

13:40
**MO3.107.2** **AUTOMATED ESTIMATION OF SPECTRAL NEIGHBORHOOD SIZE IN MANIFOLD COORDINATE REPRESENTATIONS OF HYPERSPECTRAL IMAGERY: IMPLICATIONS FOR ANOMALY FINDING, BATHYMETRY RETRIEVAL, AND LAND APPLICATIONS**
*Charles Bachmann, Thomas Ainsworth, Robert Fusina*

14:00
**MO3.107.3** **PARALLEL MORPHOLOGICAL CLASSIFICATION OF HYPERSPECTRAL IMAGERY USING EXTENDED OPENING AND CLOSING BY RECONSTRUCTION OPERATIONS**
*Antonio Plaza, Javier Plaza*

14:20
**MO3.107.4** **ENSEMBLE METHODS FOR CLASSIFICATION OF HYPERSPECTRAL DATA**
*Jón Atli Benediktsson, Xavier Ceamanos Garcia, Björn Waske, Mathieu Fauvel, Johannes R. Sveinsson*

14:40
**MO3.107.5** **A NOVEL APPROACH TO THE SELECTION OF ROBUST AND INVARIANT FEATURES FOR CLASSIFICATION OF HYPERSPECTRAL IMAGES**
*Lorenzo Bruzzone, Claudio Persello*

## MO3.108: Monday, July 7, 13:20 - 15:00

**MO3.108** **Information Extraction from High Resolution SAR images I**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 108
Co-Chairs: Mihai Datcu and Luciano Alparone

13:20
**MO3.108.1** **PHYSICS AND EXPERIMENTAL ISSUES ON HIGH RESOLUTION SAR IMAGING OF URBAN AREA**
*Hubert Cantalloube, Hélène Oriot, Élise Colin-Koeniguer*

13:40
**MO3.108.2** **NORMALIZED COHERENCY MATRIX ESTIMATION UNDER THE SIRV MODEL - ALPINE GLACIER POLSAR DATA ANALYSIS**
*Gabriel Vasile, Jean-Philippe Ovarlez, Frédéric Pascal, Céline Tison, Lionel Bombrun, Michel Gay, Emmanuel Trouvé*

14:00
**MO3.108.3** **ELECTROMAGNETIC MODELLING FOR INFORMATION EXTRACTION FROM HIGH RESOLUTION SAR IMAGES OF URBAN AREAS**
*Giorgio Franceschetti, Raffaella Guida, Antonio Iodice, Daniele Riccio*

14:20
**MO3.108.4** **AUTOMATED INFORMATION EXTRACTION FROM TERRASAR-X DATA**
*Mihai Datcu, Daniele Cerra, Houda Chaabouni-Chouayakh, Amaia de Miguel, Daniela Espinoza Molina, Gottfried Schwarz, Matteo Soccorsi*

14:40
**MO3.108.5** **OPTIMAL MULTILOOKING FOR ROBUST SAR IMAGE INDEXING**
*Gottfried Schwarz, Daniela Espinoza Molina, Helko Breit, Mihai Datcu*

## MO3.109: Monday, July 7, 13:20 - 15:00

**MO3.109** **NPOESS and SENTINEL Missions**
Session Type: Oral-Contributed
Time: Monday, July 7, 13:20 - 15:00
Place: Room 109
Co-Chairs: Karen StGermain and William Emery

13:20
**MO3.109.1** **THE NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM (NPOESS): IMPROVED CAPABILITIES FOR WEATHER FORECASTING AND ENVIRONMENTAL MONITORING**
*Dan Stockton, Carl Hoffman, John (Mike) Haas, Craig Nelson*

13:40
**MO3.109.2** **EARLY PERFORMANCE PREDICTIONS OF ENVIRONMENTAL DATA RECORDS FOR THE NPOESS PREPARATORY PROJECT VISIBLE/INFRARED IMAGER RADIOMETER SUITE (VIIRS) SENSOR**
*Bruce Guenther, Karen St. Germain, Heather Kilcoyne, Bonnie Reed, Carl Hoffman*

14:00
**MO3.109.3** **WINDSAT SPACE BORNE POLARIMETRIC MICROWAVE RADIOMETER: SENSOR CALIBRATION AND SYSTEM PERFORMANCE**
*Peter Gaiser, Michael H. Bettenhausen, Elizabeth Twarog, Ian Adams, William Johnston, Li Li*

14:20
**MO3.109.4** **THE EUROPEAN GMES SENTINEL-1 RADAR MISSION**
*Evert Attema, Malcolm Davidson, Nicolas Floury, Guido Levrini, Betlem Rosich, Björn Rommen, Paul Snoeij*

14:40
**MO3.109.5** **THE SENTINEL-1 C-SAR INSTRUMENT : STATUS AND PERFORMANCE**
*Friedhelm Rostan, Wolfgang Pitz, Sebastian Riegger, Renato Croci, Ramon Torres*

## MO3.110: Monday, July 7, 13:20 - 15:00

**MO3.110** **Coastal, Wetland, and Health Applications I**
Session Type: Oral-Contributed
Time: Monday, July 7, 13:20 - 15:00
Place: Room 110
Co-Chairs: Jim Thomson and Pietro Ceccato

13:20
**MO3.110.1** **SENSIVITY ANALYSIS OF A HYPERSPECTRAL INVERSION MODEL FOR REMOTE SENSING OF SHALLOW COASTAL ECOSYSTEMS**
*Carolina Gerardino-Neira, James Goodman, Miguel Velez-Reyes, Wilson Rivera-Gallego*

13:40
**MO3.110.2** **APPLICATION OF THERMAL IMAGING TO MEASURE ESTUARINE SURFACE VELOCITIES**
*C. Chris Chickadel, Andrew Jessup*

14:00
**MO3.110.3** **THERMAL INFRARED ESTIMATION OF TIDAL FLAT POROSITY**
*Jim Thomson*

14:20
**MO3.110.4** **MONITORING INUNDATION DYNAMICS IN PARANA RIVER, ARGENTINA, BY C AND L BAND SAR**
*Mercedes Salvia, Grings Francisco, Haydee Karszenbaum, Paolo Ferrazzoli, Patricia Kandus, Leila Guerriero*

## MO3.111: Monday, July 7, 13:20 - 15:00

**MO3.111** **Ocean Surface Winds**
Session Type: Oral-Contributed
Time: Monday, July 7, 13:20 - 15:00
Place: Room 111
Co-Chairs: Mark Bourassa and Deborah Smith

13:20
**MO3.111.1** **WINDSAT OCEAN RETRIEVALS AT MULTIPLE RESOLUTIONS**
*Michael H. Bettenhausen, Ian Adams, Peter Gaiser, William Johnston*

13:40
**MO3.111.2** **A NEW CROSS-CALIBRATED, MULTI-SATELLITE OCEAN SURFACE WIND PRODUCT**
*Robert Atlas, Ross Hoffman, Joseph Ardizzone, Mark Leidner, Juan-Carlos Jusem*

14:00
**MO3.111.3** **A KU-BAND ACTIVE/PASSIVE WIND VECTOR RETRIEVAL OVER THE OCEAN**
*Suleiman Alsweiss, Pet Laupattarakasem, W. Linwood Jones, Robert Roeder*

14:20
**MO3.111.4** **HIGH-RESOLUTION ASCAT SCATTEROMETER WINDS NEAR THE COAST**
*Ad Stoffelen, Marcos Portabella, Anton Verhoef, Jeroen Verspeek, Jur Vogelzang*

14:40
**MO3.111.5** **VALIDATION OF NOAA'S NEAR REAL-TIME ASCAT OCEAN VECTOR WINDS**
*Seubson Soisuvarn, Zorana Jelenak, Paul Chang, Qi Zhu, Gordana Sindic-Rancic*

## MO3.203: Monday, July 7, 13:20 - 15:00

**MO3.203** **Advances in Passive Microwave and Infrared Imaging and Sounding (In Honor of the Accomplishments of Prof. David H. Staelin) I**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 203
Co-Chairs: Albin J. Gasiewski and William J. Blackwell

13:20
**MO3.203.1** **NEURAL NETWORK ESTIMATION OF ATMOSPHERIC PROFILES USING AIRS/IASI/AMSU DATA IN THE PRESENCE OF CLOUDS**
*William Blackwell, Michael Pieper, Frederick Chen*

13:40
**MO3.203.2** **FALLING SNOW RETRIEVALS, HIGH FREQUENCIES, GPM, AND PROF. STAELIN**
*Gail Skofronick-Jackson*

14:00
**MO3.203.3** **GLOBAL OBSERVATIONS OF PRECIPITATION USING SATELLITE PASSIVE MILLIMETER-WAVE SENSORS**
*Chinnawat Surussavadee*

14:20
**MO3.203.4** **DEVELOPMENT OF AN OBSERVATIONAL SYSTEM SIMULATION EXPERIMENT (OSSE) FOR A GEOSTATIONARY MICROWAVE IMAGER**
*Albin Gasiewski, Bob Weber, Ambarish Jash*

14:40
**MO3.203.5** **MICROWAVE REMOTE SENSING OF PLANETARY ATMOSPHERES: FROM STAELIN AND BARRETT TO THE NASA JUNO MISSION**
*Paul Steffes*

## MO3.210: Monday, July 7, 13:20 - 15:00

**MO3.210** **Implementation of GEOSS: Technical and Application Developments**
Session Type: Oral-Invited
Time: Monday, July 7, 13:20 - 15:00
Place: Room 210
Co-Chairs: Granville Paules and Jay Pearlman

13:20
**MO3.210.1** **GEOSS FROM ORBIT, A SENSOR WEB APPROACH**
*Terence Lesley van Zyl*

13:40
**MO3.210.2** **GEOSS ARCHITECTURE IMPLEMENTATION PILOT**
*George Percivall, Joshua Lieberman*

14:00
**MO3.210.3** **SERVER-BASED SUPPORT TO AUTOMATIC CO-REGISTRATION OF SATELLITE IMAGERY**
*Nevin Bryant, Walter Bunch, Richard Fretz, Thomas Logan, Albert Zobrist*

14:20
**MO3.210.4** **THE GLOBAL OBSERVING SYSTEMS INFORMATION CENTER (GOSIC) – A PORTAL FOR GEOSS RELATED DATA & INFORMATION.**
*Christina Lief*

14:40
**MO3.210.5** **SHARING EARTH SCIENCE INFORMATION TO SUPPORT THE GLOBAL EARTH OBSERVING SYSTEM OF SYSTEMS (GEOSS)**
*Myra Bambacus, Chaowei Yang, John Evans, Zhenlong Li, Wenwen Li*

## MO4.101: Monday, July 7, 15:20 - 17:00

**MO4.101** **Subsurface Object Detection**
Session Type: Oral-Contributed
Time: Monday, July 7, 15:20 - 17:00
Place: Room 101
Co-Chairs: Olga Lopera and Paul Gader

15:20
**MO4.101.1** **TEXTURE FEATURE SELECTION FOR BURIED MINE DETECTION IN AIRBORNE MULTISPECTRAL IMAGERY**
*Spandan Tiwari, Sanjeev Agarwal, Anh Trang*

15:40
**MO4.101.2** **INCORPORATING UNCERTAINTY IN UXO DISCRIMINATION**
*Laurens Beran, Doug Oldenburg*

16:00
**MO4.101.3** **A PARAMETER-ESTIMATION-BASED CHANGE DETECTION METHODOLOGY FOR LANDMINE LOCALIZATION FROM GROUND-PENETRATING RADAR DATA**
*Olga Lopera, Nada Milisavljevic, Benoit Macq, Sebastien Lambot*

16:20
**MO4.101.4** **REJECTION OF SURFACE CLUTTER BASED ON AVERAGED WIGNER DISTRIBUTIONS FOR TARGET DETECTION**
*Nicolas Morelle, Markus Testorf, Nadege Thirion-Moreau, Marc Saillard*

16:40
**MO4.101.5** **STEPPED-FREQUENCY RADAR SYSTEM IN GATING MODE: AN EXPERIMENT AS A NEW HELICOPTER-BORNE GPR SYSTEM FOR GEOLOGICAL APPLICATIONS**
*Dieter Eisenburger, Yvonne Krellmann, Harald Lentz, Gunnar Triltzsch*

## MO4.102: Monday, July 7, 15:20 - 17:00

**MO4.102** **Moving Targets**
Session Type: Oral-Contributed
Time: Monday, July 7, 15:20 - 17:00
Place: Room 102
Co-Chairs: Paul Kersten and Shen Chiu

15:20
**MO4.102.1** **MOVING TARGET RELATIVE SPEED ESTIMATION IN THE PRESENCE OF STRONG STATIONARY SURROUNDING USING A SINGLE ANTENNA UWB SAR SYSTEM**
*Thomas K. Sjögren, Viet Thuy Vu, Mats Pettersson*

15:40
**MO4.102.2** **MOVING TARGET DETECTION BY FOCUSING FOR FREQUENCY DOMAIN ALGORITHMS IN UWB LOW FREQUENCY SAR**
*Viet Thuy Vu, Thomas K. Sjögren, Mats Pettersson*

16:00
**MO4.102.3** **EXTENDING AIRBORNE SAR-ATI ALGORITHMS TO RADARSAT-2 MOVING OBJECT DETECTION EXPERIMENT**
*Marina Dragosevic, Shen Chiu*

16:20
**MO4.102.4** **CHANGE DETECTION FOR TRAFFIC MONITORING IN TERRASAR-X IMAGERY**
*Gintautas Palubinskas, Hartmut Runge*

16:40
**MO4.102.5** **TARGET DETECTION IN MULTIPLE-VIEWING THROUGH-THE-WALL RADAR IMAGING**
*Christian Debes, Moeness Amin, Abdelhak Zoubir*

## MO4.103: Monday, July 7, 15:20 - 17:00

**MO4.103** **ALOS in 2008 I**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 103
Co-Chairs: M. Shimada and Ridha Touzi

15:20
**MO4.103.1** **PALSAR INSAR OBSERVATION OF CRUSTAL DEFORMATION DUE TO THE 2007 CHUETSU-OKI EARTHQUAKE (M6.8)**
*Masato Furuya, Youichiro Takada, Yosuke Aoki*

15:40
**MO4.103.2** **UPDATED RESULTS OF CALIBRATION AND VALIDATION OF ALOS OPTICAL SENSORS**
*Takeo Tadono, Masanobu Shimada, Hiroshi Murakami, Junichi Takaku, Sachi Kawamoto*

16:00
**MO4.103.3** **HIGH RESOLUTION DSM GENERATION FROM ALOS PRISM - CALIBRATION UPDATES-**
*Junichi Takaku, Takeo Tadono, Masanobu Shimada*

16:20
**MO4.103.4** **ACCURATE DEM AND ORTHO-RECTIFIED IMAGE PRODUCTION FROM ALOS/PRISM**
*Makoto Maruya, Hiroshi Ohyama*

16:40
**MO4.103.5** **IMPROVEMENT OF AVNIR-2 RADIOMETRIC CALIBRATION BY TOA DIRECTIONAL-REFLECTANCE CROSS-CALIBRATION AND ON-BOARD CALIBRATION DATA**
*Hiroshi Murakami, Takeo Tadono, Hiroko Imai, Masanobu Shimada*

## MO4.104: Monday, July 7, 15:20 - 17:00

**MO4.104** **Crop and Forest Monitoring with Microwave Radiometric Sensors II**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 104
Co-Chairs: Simonetta Paloscia and Peggy O'Neill

15:20
**MO4.104.1** **VALIDATION OF THE SMOS LEVEL 2 RETRIEVAL ALGORITHM OVER CROPS AND PRAIRIES FROM THE COSMOS-NAFE CAMPAIGN**
*Kauzar Saleh, Gilles Boulet, Yann Kerr, Philippe Maisongrande, Philippe Richaume, Jean-Pierre Wigneron, Steven Delwart, Rocco Panciera, Jeffrey Walker*

15:40
**MO4.104.2** **MONITORING OF MICROWAVE BRIGHTNESS OF GROWING CROPS DURING THE MICROWAVE WATER ENERGY BALANCE EXPERIMENTS (MICROWEXS)**
*Jasmeet Judge, Wendy Graham, Jennifer Jacobs, James Jones*

16:00
**MO4.104.3** **EVALUATION OF A FIRST-ORDER TAU-OMEGA MODEL OF TERRESTRIAL MICROWAVE EMISSION**
*Brian Hornbuckle, Tracy Rowlandson*

16:20
**MO4.104.4** **MONITORING VEGETATION WATER CONTENT USING MICROWAVE VEGETATION INDICES**
*Jing Tao, Jiancheng Shi, Thomas Jackson, Jinyang Du, Rajat Bindlish, Lixin Zhang*

16:40
**MO4.104.5** **MONITORING WINTER WHEAT GROWTH WITH GRAND BASED MICROWAVE RADIOMETERS (GBMR)**
*Hui Lu, Toshio Koike, Hiroyuki Tsutsui, Tobias Graf, David Kuria*

## MO4.105: Monday, July 7, 15:20 - 17:00

**MO4.105** **Remote Sensing Applications to Archaeology II**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 105
Co-Chairs: Ronald G. Blom and Douglas Comer

15:20
**MO4.105.1** **HYDROLOGIC HISTORY OF THE EASTERN SAHARA FROM ORBITAL SAR: A SUPPORT TO ARCHAEOLOGICAL EXPLORATION**
*Philippe Paillou, Tom Farr, Ron Blom*

15:40
**MO4.105.2** **APPLICATION OF REMOTE SENSING TO ARCHAEOLOGY: REQUIREMENTS FOR SUCCESS AND EXAMPLES FROM DIVERSE ENVIRONMENTS**
*Ronald Blom*

16:00
**MO4.105.3** **ANGKOR AND BEYOND: APPLICATIONS OF REMOTE SENSING TO EARLY SETTLEMENT SITES IN CAMBODIA**
*Damian Evans, Roland Fletcher*

16:20
**MO4.105.4** **3D MAPPING OF THE PERFORMANCE OF URBAN PLACES**
*Aysegul Ozbakir*

## MO4.107: Monday, July 7, 15:20 - 17:00

**MO4.107** **Frontiers for Classification of Hyperspectral Data II**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 107
Co-Chairs: Melba Crawford and Jocelyn Chanussot

15:20
**MO4.107.1** **FAST HYPERSPECTRAL IMAGE CLASSIFICATION USING BINARY QUATERNION-MOMENT-PRESERVING THRESHOLDING TECHNIQUE**
*Lena Chang, Ching-Min Cheng, Yang-Lang Chang*

15:40
**MO4.107.2** **CLUSTER-BASED ENSEMBLE CLASSIFICATION FOR HYPERSPECTRAL REMOTE SENSING IMAGES**
*Mingmin Chi, Kun Qian, Jón Atli Benediktsson*

16:00
**MO4.107.3** **SPATIALLY ADAPTED MANIFOLD LEARNING FOR CLASSIFICATION OF HYPERSPECTRAL IMAGERY WITH INSUFFICIENT LABELED DATA**
*Wonkook Kim, Melba Crawford, Joydeep Ghosh*

16:20
**MO4.107.4** **A NOVEL RANDOM SUBSPACE METHOD USING SPECTRAL AND SPATIAL INFORMATION FOR HYPERSPECTRAL IMAGE CLASSIFICATION**
*Bor-Chen Kuo, Chun-Hsiang Chuang, Chih-Cheng Hung, Szu-Wei Yang*

16:40
**MO4.107.5** **EC-GLRT: DETECTING WEAK PLUMES IN NON-GAUSSIAN HYPERSPECTRAL CLUTTER USING AN ELLIPTICALLY-CONTOURED GENERALIZED LIKELIHOOD RATIO TEST**
*James Theiler, Bernard Foy*

## MO4.108: Monday, July 7, 15:20 - 17:00

**MO4.108** **Information Extraction from High Resolution SAR images II**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 108
Co-Chairs: Ridha Touzi and Mihai Datcu

15:20
**MO4.108.1** **SAR IMAGE DESPECKLING IN THE UNDECIMATED CONTOURLET DOMAIN: A COMPARISON OF LMMSE AND MAP APPROACHES**
*Fabrizio Argenti, Tiziano Bianchi, Giovanni Martucci di Scarfizzi, Luciano Alparone*

15:40
**MO4.108.2** **SAR IMAGE FILTERING VIA LEARNED DICTIONARIES AND SPARSE REPRESENTATIONS**
*Samuel Foucher*

16:00
**MO4.108.3** **STATISTICAL SIMILARITY MEASURE FOR OIL SLICK DETECTION IN SAR IMAGE**
*Bahia Lounis, Gregoire Mercier, Aichouche Belhadj Aissa*

16:20
**MO4.108.4** **IMAGE CLASSIFICATION USING DATA COMPRESSION BASED TECHNIQUES**
*Daniele Cerra, Mihai Datcu*

16:40
**MO4.108.5** **COMPARISON OF THREE UNSUPERVISED SEGMENTATION ALGORITHMS FOR SAR DATA IN URBAN AREAS**
*Wenju He, Marc Jäger, Olaf Hellwich*

## MO4.109: Monday, July 7, 15:20 - 17:00

**MO4.109** **Reflective-Band Vicarious Calibration for Intersensor Comparisons**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 109
Co-Chairs: Kurt Thome and Ron Lockwood

15:20
**MO4.109.1** **REFINEMENT OF THE METHOD FOR USING PSEUDO-INVARIANT SITES FOR LONG TERM CALIBRATION TRENDING OF LANDSAT REFLECTIVE BANDS**
*John R. Schott, Clifton R. Anderson, Julia A. Barsi*

15:40
**MO4.109.2** **PRE-FLIGHT AND VICARIOUS CALIBRATION OF ARTEMIS**
*Kurtis Thome, Ronald Lockwood, Stuart Biggar, Nikolaus Anderson, Jeffrey Czapla-Myers, Steven Miller, Thomas Chrien, Stephen Schiller, John Silny, Mary Ann Glennon, Thomas Cooley*

16:00
**MO4.109.3** **USE OF SMALL PSEUDO-INVARIANT SITES FOR LONG-TERM SENSOR CALIBRATION**
*Dennis Helder, Daniel Morstad*

16:20
**MO4.109.4** **CLIMATE QUALITY BROADBAND AND NARROWBAND SOLAR REFLECTED RADIANCE CALIBRATION BETWEEN SENSORS IN ORBIT**
*Bruce Wielicki, David Doelling, David Young, Donald Garber*

16:40
**MO4.109.5** **REFLECTIVE BANDS VICARIOUS CALIBRATION OF THE MODIS AND AVHRR SENSORS USING OCEAN, CLOUDS AND DESERT OBSERVATIONS**
*Eric Vermote*

## MO4.110: Monday, July 7, 15:20 - 17:00

**MO4.110** **Coastal, Wetland, and Health Applications II**
Session Type: Oral-Contributed
Time: Monday, July 7, 15:20 - 17:00
Place: Room 110
Co-Chairs: Jim Thomson and Pietro Ceccato

15:20
**MO4.110.1** **RADAR MONITORING OF WETLAND HYDROLOGY: DYNAMIC INFORMATION FOR THE ASSESSMENT OF ECOSYSTEM SERVICES**
*Megan Lang, Gregory W. McCarty, Jerry Ritchie, Ali Sadeghi, Dean Hively*

15:40
**MO4.110.2** **SPECTRAL AND SPATIAL VARIATION AT LEAF AND PATCH SCALE OF INVASIVE WETLAND WEEDS**
*Laurie Chisholm, John Marthick*

16:00
**MO4.110.3** **STUDYING THE RELATIONSHIP BETWEEN ENVIRONMENTAL FACTORS RETRIEVED FROM REMOTELY-SENSED IMAGES AND RIFT VALLEY FEVER IN SENEGAL**
*Pietro Ceccato, Vincent Martin, Judy Omumbo, Ousmane Ndiaye, Michael Bell, Madeleine Thomson, Assaf Anyamba, Yaya Thiongane, Baba Sall*

16:20
**MO4.110.4** **RISK MAPPING OF THE SCHISTOSOMIASIS IN MINAS GERAIS STATE, BRAZIL, USING MODIS AND SOCIOECONOMICS SPATIAL DATA**
*Flávia Toledo Martins, Corina Costa Freitas, Luciano Vieira Dutra, Fernanda Rodrigues da Fonseca, Ricardo José de Paula Souza e Guimarães, Ronaldo Santos do Amaral, Ana Clara Mourão Moura, Omar dos Santos Carvalho*

16:40
**MO4.110.5** **RECOGNITION OF URBAN PATTERNS RELATED TO LEPTOSPIROSIS CONTAMINATION RISKS USING OBJECT BASED CLASSIFICATION OF AERIAL PHOTOGRAPHY. TEST AREAS: INFORMAL SETTLEMENTS OF THE RAILROAD SUBURB OF SALVADOR, BRAZIL.**
*Patricia Brito, Helbert Arenas, Nina Lam, José Alberto Quintanilha*

## MO4.111: Monday, July 7, 15:20 - 17:00

**MO4.111** **Ocean Wind and Weather Sensing**
Session Type: Oral-Contributed
Time: Monday, July 7, 15:20 - 17:00
Place: Room 111
Co-Chairs: David Weissman and Frank Monaldo

15:20
**MO4.111.1** **GLOBAL NAVIGATION SATELLITE SYSTEM-REFLECTOMETRY (GNSS-R) FROM THE UK-DMC SATELLITE FOR REMOTE SENSING OF THE OCEAN SURFACE**
*Maria Paola Clarizia, Christine Gommenginger, Scott Gleason, Carmela Galdi, Martin Unwin*

15:40
**MO4.111.2** **PERFORMANCE ASSESSMENT OF GNSS-R SPACE BASED SCATTEROMETRY BY MEANS OF DELAY-DOPPLER MAPS**
*Salvatore D'Addio, Christopher Buck*

16:00
**MO4.111.3** **HURRICANE WIND RETRIEVALS FROM THE QUIKSCAT SCATTEROMETER AND COMPARISON WITH H*WIND OCEAN VECTOR WINDS**
*Pet Laupattarakasem, W. Linwood Jones, Christopher C. Hennon*

16:20
**MO4.111.4** **HURRICANE IMAGING RADIOMETER WIDE SWATH SIMULATION FOR WIND SPEED AND RAIN RATE**
*Salem El-Nimri, Suleiman Alsweiss, W. Linwood Jones, Eric Uhlhorn, James Johnson*

16:40
**MO4.111.5** **STATISTIAL ANALYSIS OF THE ELECTROMAGNETIC FIELD SCATTERED BY THE OCEAN SURFACE IN VARIOUS WEATHER CONDITIONS: A NUMERICAL STUDY IN L-BAND**
*Arnaud Coatanhay*

## MO4.203: Monday, July 7, 15:20 - 17:00

**MO4.203** **Advances in Passive Microwave and Infrared Imaging and Sounding (In Honor of the Accomplishments of Prof. David H. Staelin) II**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 203
Co-Chairs: William J. Blackwell and Albin J. Gasiewski

15:20
**MO4.203.1** **NPOESS MICROWAVE IMAGER/SOUNDER (MIS): THE NEXT GENERATION OPERATIONAL MICROWAVE IMAGING AND SOUNDING RADIOMETER**
*David Kunkee*

15:40
**MO4.203.2** **RFI MITIGATION IN SPACEBORNE MICROWAVE RADIOMETERS**
*Jeffrey Piepmeier*

16:00
**MO4.203.3** **EMISSION AND SCATTERING EFFECTS IN PASSIVE MICROWAVE OBSERVATIONS OF ANTARCTICA**
*Philip Rosenkranz*

16:20
**MO4.203.4** **MICROWAVE RADIOMETRY FOR REMOTE SENSING OF SOIL MOISTURE AND SNOW**
*Edward Kim*

16:40
**MO4.203.5** **DEVELOPMENT OF A LOBE-DIFFERENCING CORRELATION RADIOMETER (LDCR) FOR AIRBORNE UAV SSS MAPPING**
*Eric McIntyre, Albin Gasiewski, Vladimir Leuski*

17:00
**MO4.203.6** **IMPROVED SIMULATION METHODOLOGY FOR RETRIEVAL OF CONVECTIVE PRECIPITATION FROM SPACEBORNE PASSIVE MICROWAVE MEASUREMENTS**
*R. Vincent Leslie, Laura Bickmeier, William Blackwell, Laura Jairam, Frederick Chen*

## MO4.210: Monday, July 7, 15:20 - 17:00

**MO4.210** **Implementation of GEOSS: Science and Modeling**
Session Type: Oral-Invited
Time: Monday, July 7, 15:20 - 17:00
Place: Room 210
Co-Chairs: Jay Pearlman and Granville Paules

15:20
**MO4.210.1** **HOW GEOSS INFRASTRUCTURE ENABLES INTERDISCIPLINARY SCIENCE**
*Siri Jodha Khalsa, Stefano Nativi, Gary Geller, Reece Lumsden*

15:40
**MO4.210.2** **THE CEOS CALVAL PORTAL: PATHWAY TO GEOSS DATA COMPARABILITY TOWARD CONSISTENT CALIBRATION USING COMMON PRACTICES AND CALVAL SITES**
*Changyong Cao, Stephen Ungar, Pascal Lecomte, Xiaoxiong (Jack) Xiong, Xiwu Zahn, Petya Campbell*

16:00
**MO4.210.3** **THE DESIGN AND IMPLEMENTATION OF A VIRTUAL SENSOR WEB PLATFORM OF TARGET OBSERVING FOR BAD WEATHER MONITORING**
*Hong Fan, Liping Di, Genong Yu*

16:20
**MO4.210.4** **GPS RADIO OCCULTATION AS PART OF THE GLOBAL EARTH OBSERVING SYSTEM**
*Anthony J. Mannucci, Chi O. Ao, Byron A. Iijima, Attila Komjathy, Thomas Yunck, Marc K. Pestana, Brian D. Wilson*

16:40
**MO4.210.5** **OCEAN/SEA-ICE CLIMATE MONITORING INC - ESTABLISHING A ROUTINE OCEAN/SEA-ICE CLIMATE MONITORING AND MEASURING FACILITY**
*Chris Hill, Patrick Heimbach*

## MOP.A: Monday, July 7, 17:00 - 18:30

**MOP.A** **Techniques for Agroecosystem Monitoring**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area A
Co-Chairs: Brian Hornbuckle and Jasmeet Judge

**MOP.A.1** **RELATING SURFACE ALBEDO AND VEGETATION INDEX WITH SURFACE DRYNESS USING LANDSAT ETM+ IMAGERY**
*Yunjun Yao, Qiming Qin, Abduwasit Ghulam, Lin Zhu, Nan Yang*

**MOP.A.2** **ESTIMATION OF THE REGIONAL EVAPOTRANSPIRATION OVER RICE PADDY USING MULTI-SPECTRAL REMOTE SENSING DATA**
*Tzu-Yin Chang, Yuei-An Liou, Yi-Ying Chen, Han-Jie Ho*

**MOP.A.3** **THE INTEGRATION OF MAGNITUDE AND SHAPE RELATED FEATURES IN HYPERSPECTRAL MIXTURE ANALYSIS TO MONITOR WEEDS IN CITRUS ORCHARDS**
*Ben Somers, Kenneth Cools, Stephanie Delalieux, Willem W. Verstraeten, Jan Verbesselt, Stefaan Lhermitte, Pol Coppin*

**MOP.A.4** **APPLICATION OF SATELLITE REMOTE SENSING FOR SPATIAL MODELLING OF MINIMUM TEMPERATURES IN SPRING FROST SITUATIONS IN THE CHAMPAGNE VINEYARD**
*Malika Madelin, Hervé Quénol*

**MOP.A.5** **SPECTRAL REFLECTANCE OF DATE PALM TREES RELATIONSHIP TO YIELD AND N-FERTILIZATION**
*Yousef Aldakheel, Faisal Zeinldin, Massoud Abdel Aati*

## MOP.B: Monday, July 7, 17:00 - 18:30

**MOP.B** **Applications of Agroecosystem Monitoring**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area B
Co-Chairs: Brian Hornbuckle and Jasmeet Judge

**MOP.B.1** **WINTER WHEAT YIELD ESTIMATION USING VGT-NDVI AND METEOROLOGICAL DATA**
*Hao Yan, Yingbo Song, Yingyu Hou, Yonglan Qian, Jianlin Wang, Liuxi Mao*

**MOP.B.2** **THE TAKE-ALL OF WHEAT DISEASES FEATURE EXTRACTION METHOD STUDY BY USING GROUND SPECTRAL MEASUREMENT DATA AND TM MULTISPECTRAL DATA**
*Jianwen Ma, Xue Chen, Fangyan Yuan, Hongbo Qiao*

**MOP.B.3** **MONITORING WINTER WHEAT PHENOLOGY USING SPOT/VEGETATION DATA**
*Linlin Lu, Huadong Guo, Jingjuan Liao*

**MOP.B.4** **FEASIBILITY OF USING REMOTE SENSING TECHNIQUES TO DETECT SPIDER MITE DAMAGE IN STONE FRUIT ORCHARDS**
*Minghua Zhang, Adam Hale, Eike Luedeling*

**MOP.B.5** **STUDY ON PHENOPHASE OF WINTER WHEAT FROM MODIS DATA IN HEBEI, CHINA**
*Feng Yan, Peijun Shi, Jianjun Wu, Yanjiao Wang*

**MOP.B.6** **APPLICATION OF SEBS TO DROUGHT MONITORING IN NORTH CHINA PLAIN**
*Yanbo He, Houquan Lu, Jianlin Wang, Huanping Wu*

**MOP.B.7** **APPLYING REMOTE SENSING TECHNIQUES INTO CROP EMERGENCE MONITORING**
*Yanbo He, Jingwen Guo, Huanping Wu*

**MOP.B.8** **DROUGHT MONITORING IN NORTHERN CHINA PLAIN COMBINING RS AND GIS TECHNOLOGY**
*Jian Wu, Guoyin Cai, Yong Xue, Mingyi Du*

**MOP.B.9** **STUDY ON THE SPATIO-TEMPORAL CHANGES OF ECOSYSTEM SERVICE VALUE IN THE NORTH SLOPE OF TIANSHAN MOUNTAINS**
*Bo Li, Jie Chong, Rui Hong, Shu-Hui Zhang, Xin-Shi Zhang*

## MOP.C: Monday, July 7, 17:00 - 18:30

**MOP.C** **Ocean Wind Measurements**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area C
Co-Chairs: Robert Contreras and Evert Attema

**MOP.C.1** **VALIDATION OF QSCAT-1 GEOPHYSICAL MODEL FUNCTION USING SEAWINDS LEVEL 2 AND BUOY DATA**
*Xuetong Xie, Qiming Zeng, Weidong Hu, Wenxian Yu, Kehai Chen, Yu Fang*

**MOP.C.2** **OPERATIONAL TECHNIQUE IN TYPHOON WIND RADII USING SATELLITE MICROWAVE REMOTE SENSOR DATA**
*Jun Park, Jae-Young Byon, Eunha Sohn, Yoonjae Kim*

**MOP.C.3** **A SPACEBORNE RADAR FOR DIRECTIONAL WAVE SPECTRUM ESTIMATION: FIRST PERFORMANCE SIMULATIONS**
*Céline Tison, Danièle Hauser, Guy Carayon, Juliette Lambin, Patrick Castillan, Jean-Claude Souyris*

**MOP.C.4** **EFFECTIVENESS OF QUIKSCAT'S ULTRA HIGH RESOLUTION IMAGES IN DETERMINING TROPICAL STORM EYE LOCATION**
*Faozi Said, David G. Long*

**MOP.C.5** **SYSTEM DESIGN AND PERFORMANCE SIMULATION OF A SPACEBORNE KU-BAND ROTATION FAN-BEAM SCATTEROMETER**
*Xiaolong Dong, Wenming Lin*

**MOP.C.6** **NEURAL NETWORK RETRIEVAL OF SEA SURFACE WIND SPEED FROM ADVANCED MICROWAVE SCANNING RADIOMETER-E DATA**
*Biao Zhang, Yijun He, Wang Lijing*

**MOP.C.7** **HIGH RESOLUTION WIND VECTOR RETRIEVALS IN TROPICAL CYCLONES USING WINDSAT**
*Ian Adams, Michael H. Bettenhausen, Peter Gaiser*

**MOP.C.8** **PERFORMANCE SIMULATIONS FOR A SYNTHETIC APERTURE RADIOMETER MEASURING PEAK SURFACE WIND SPEED IN HURRICANES**
*Ruba Amarin, Christopher Ruf, James Johnson, W. Linwood Jones*

**MOP.C.9** **DEPENDENCY OF NRCS OF OCEAN SURFACE ON WIND DIRECTION USING AN AIRBORNE DUAL-FREQUENCY POLARIMETRIC SAR OBSERVATION**
*Akitsugu Nadai, Toshihiko Umehara, Takeshi Matsuoka, Tatsuharu Kobayashi, Seiho Uratsuka*

**MOP.C.10** **AN ANISOTROPIC OCEAN SURFACE EMISSIVITY MODEL BASED ON WINDSAT POLARIMETRIC BRIGHTNESS OBSERVATIONS**
*Dean Smith, Bob Weber, Albin Gasiewski*

## MOP.D: Monday, July 7, 17:00 - 18:30

**MOP.D** **Active and Passive Ocean Observations**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area D
Co-Chairs: Tim Liu and Martti Hallikainen

**MOP.D.1** **PRELIMINARY POLARIMETRIC MEASUREMENTS OF RUFFLED WATER SURFACE RADAR BACKSCATTERING COEFFICIENTS AND BRIGHTNESS TEMPERATURES ANGULAR DEPENDENCES AT 15GHZ**
*Arsen Arakelyan, Artashes Arakelyan, Sargis Darbinyan, Melanya Grigoryan, Izabela Hakobyan, Astghik Hambaryan, Vardan Hambaryan, Vanik Karyan, Mushegh Manukyan, Gagik Hovhannisyan*

**MOP.D.2** **MONITORING OF SURFACE OCEAN CIRCULATION IN THE GULF OF LIONS (NORTH-WEST MEDITERRANEAN SEA) USING WERA HF RADARS**
*Philippe Forget, Barbin Yves, Gael André*

**MOP.D.3** **POLARIMETRIC SCATTERING MECHANIZMS OF OCEAN SURFACE FROM WAVE BREAKING OR AT LARGE INCIDENT ANGLES**
*Haiyan Li, Shufang Zhang, Hui Shen, Yijun He*

**MOP.D.4** **ESTIMATION OF SURFACE VELOCITY FROM INFRARED IMAGES USING THE GLOBAL OPTIMAL SOLUTION TO AN INVERSE MODEL**
*Wei Chen, Richard Mied, Colin Shen*

**MOP.D.5** **AN IMPROVED TWO-SCALE MODEL FOR THE OCEAN SURFACE BISTATIC SCATTERING**
*Naheed Sajjad, Ali Khenchaf, Arnaud Coatanhay, Ahmad Awada*

**MOP.D.6** **PROPERTIES OF MESOSCALE EDDIES AROUND THE PHILIPPINE SEA DERIVED FROM SATELLITE DATA AND A NUMERICAL MODEL**
*Woei-Jen Sheu, Chau-Ron Wu*

**MOP.D.7** **OBSERVATIONS OF OCEAN-ATMOSPHERIC COUPLING IN THE TROPICAL INSTABILITY WAVES DURING LA NIÑA**
*Wang Xin, Fang Xiang, Qiu Hong, Zhu Yuanjing*

**MOP.D.8** **A STUDY ON GEOPHYSICAL MODEL FUNCTION MODELING WITH WATER SURFACE TEMPERATURE AS ONE OF THE INPUT PARAMETERS**
*Xuetong Xie, Kehai Chen, Wenxian Yu, Weidong Hu, Qiming Zeng, Yu Fang*

**MOP.D.9** **OCEAN SURFACE OBSERVATION BY C-BAND POLARIMETRIC WEATHER RADAR IN OKINAWA ISLAND**
*Makoto Satake, Yukari Shusse, Katsuhiro Nakagawa, Shoichiro Kojima, Shinsuke Sato*

## MOP.E: Monday, July 7, 17:00 - 18:30

**MOP.E** **SAR Observations of Ocean Processes**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area E
Co-Chairs: Donald Thompson and Paul Hwang

**MOP.E.1** **SIMULATION STUDY ON THE EFFECT OF WIND DIRECTION ON SAR IMAGING SHALLOW WATER BATHYMETRY**
*Kaiguo Fan, Mingxia He, Weigen Huang, Bin Fu, Xilin Gan*

**MOP.E.2** **ESTIMATION OF OCEAN CURRENT VELOCITY IN COASTAL AREA USING RADARSAT-1 SAR IMAGES AND HF-RADAR DATA**
*Moon-Kyung Kang, Hoonyol Lee, Chan-Su Yang, Wang-Jung Yoon*

**MOP.E.3** **OCEANOGRAPHIC INVESTIGATION OF IEODO AREA OF KOREAN PENINSULA USING SAR DATA**
*Chan-Su Yang, Moon-Kyung Kang*

**MOP.E.4** **SAR MEASUREMENT OF OCEAN SURFACE WIND USING A PHYSICS MODEL**
*Qing Xu, Hui Lin, Xiaobin Yin, Quanan Zheng, Yuguang Liu, Yongcun Cheng*

**MOP.E.5** **DRESSED AND UNDRESSED SEA SPECTRA IN OCEANIC REMOTE SENSING**
*Frédéric Nouguier, Charles-Antoine Guérin, Bertrand Chapron*

**MOP.E.6** **A PARAMETRIC ALGORITHM TO RETRIEVE OCEAN WAVE SPECTRA FROM INTERFEROMETRIC SYNTHETIC APERTURE RADAR**
*Zhang Biao, He Yijun*

## MOP.F: Monday, July 7, 17:00 - 18:30

**MOP.F** **Coastal, Wetland, and Health Applications III**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area F
Co-Chairs: Jim Thomson and Pietro Ceccato

**MOP.F.1** **REMOTELY MONITORING GREAT LAKES COASTAL WETLANDS WITH MULTI-SENSOR, MULTI-TEMPORAL SAR, AND MULTI-SPECTRAL DATA**
*Laura Bourgeau-Chavez, Mitch Nowels, Kevin Riordan, Nicole Miller, Richard Powell*

**MOP.F.2** **INTEGRATION OF SPATIAL CHAOTIC MODEL AND TYPE-2 FUZZY SETS TO COASTLINE DETECTION IN SAR IMAGES**
*Yu-Chang Tzeng, Dana Chen, Kun-Shan Chen*

**MOP.F.3** **THE EFFECT OF HURRICANE KATRINA ON LOUISIANA'S GULF COAST**
*Willis Hawkins Jr.*

**MOP.F.4** **MONITORING WATER CONSTITUENTS AND SALINITY VARIATIONS OF SALTWATER USING EO-1 HYPERION SATELLITE IMAGERY IN THE PEARL RIVER ESTUARY, CHINA**
*Li-Gang Fang, Shui-Sen Chen, Hong-Li Li, Cai-Dong Gu*

**MOP.F.5** **RESEARCH ON EVOLUTION PROCESS OF RIVERWAY IN QINGKOU REGION BASED ON MULTI-TEMPORAL REMOTE SENSING TECHNIQUES**
*Qiang Hu, Feng Mao, Jianxi Huang, Weijun Sun, Qiang Li, Wensheng Zhou*

**MOP.F.6** **SPECTRAL CHARACTERISTICS OF SUAEDA JAPONICA AND ITS DISTRIBUTINON ASSOCIATED WITH MORPHOLOGIC CHANGE OF THE GANGHWA-DO TIDAL FLAT, KOREA**
*Yoon-Kyung Lee, Jin-Ah Eom, Joo-Hyung Ryu, Joong-Sun Won*

**MOP.F.7** **POYANG LAKE WETLAND PLANTS MICROWAVE SCATTERING CHARACTERISTICS RESEARCH AND BIOMASS INVERSION**
*Guozhuang Shen, Lei Dong, Jingjuan Liao, Huadong Guo*

**MOP.F.8** **COMPARISON OF SHIP DETECTABILITY USING SAR POLARIZATION DATA: ENVISAT ASAR AP MODE**
*Chan-Su Yang, Kazuo Ouchi*

**MOP.F.9** **SIMULATION STUDY ON OPTIMAL CONDITIONS FOR SHALLOW WATER BATHYMETRY OBSERVATION BY SAR**
*Kaiguo Fan, Weigen Huang, Mingxia He, Bin Fu*

## MOP.G: Monday, July 7, 17:00 - 18:30

**MOP.G** **Coastal, Wetland, and Health Applications IV**
Session Type: Poster
Time: Monday, July 7, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area G
Co-Chairs: Jim Thomson and Pietro Ceccato

**MOP.G.1** **DYNAMIC CHANGES OF COASTAL WETLANDS IN XIAMEN WESTERN BAY IN THE RECENT 100 YEARS**
*Weiguo Wang, Zhikun Lai, Jun Liu*

**MOP.G.2** **METHODOLOGY FOR STORM SURGE RISK ANALYSIS**
*Junhua Teng, Tianyu Zhang, Meixian Sun, Fujiang Yu, Miao Yu*

**MOP.G.3** **RETRIVING WATER DEPTH, INHERENT OPTICAL PROPERTIES AND BOTTOM REFLECTANCE BY SPECTRUM MATCHING IN TURBID COASTAL WATERS**
*Narvada Dewkurun, Wang Cheng Alice Heng, Chew Wai Chang, Soo Chin Liew*

**MOP.G.4** **SATELLITE OBSERVATIONS OF COASTAL CHANGES IN ACEH AFTER THE 2004 TSUNAMI**
*Soo Chin Liew, Avijit Gupta, Poh Poh Wong, Leong Keong Kwoh*

**MOP.G.5** **USE OF ATMOSPHERIC INFRARED SOUNDER (AIRS) SURFACE AIR AND SKIN TEMPERATURE DATA OVER URBAN-INDUSTRIAL CENTERS IN CANADA AND USA**
*Alex Wallace, Julie Wallace*

**MOP.G.6** **USING AIRBORNE AND SATELLITE IMAGERY TO DISTINGUISH AND MAP BLACK MANGROVE ALONG THE SOUTH TEXAS GULF COAST**
*Tashieka James, Shobha Sriharan, James Everitt, Chenghai Yang*

**MOP.G.7** **MAPPING RIPARIAN AND WETLAND WEEDS WITH HIGH RESOLUTION SATELLITE IMAGERY**
*Shobha Sriharan, James Everitt, Chenghai Yang, Reginald Fletcher*

**MOP.G.8** **QUALITY EVALUATION OF MODIS AND MERIS CHLOROPHYLL AND WATER LEAVING REFLECTANCE L2 PRODUCTS IN COASTAL AREA BY COMPARISON TO IN SITU DATASET**
*Andrea Guerriero, Vito de Pasquale, Raffaella Matarrese, Ciriaco Pasquale*

**MOP.G.9** **A STUDY ON THE CHARACTERISTICS OF THE SEDIMENTARY ENVIRONMENTS BY USING SAR DATA IN THE GANGHWA TIDAL FLAT**
*Kye Lim Kim, Sang-Wan Kim, Joo-Hyung Ryu, Sang-Hoon Hong*

## TU1.210: Tuesday, July 8, 08:20 - 10:00

### Panel Session

**TU1.210** **Numerical Weather Prediction (NWP), Radiance Data Assimilation and Ocean Synoptics**
Session Type: Panel
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 210
Chair: Al Gasiewski
About: Weather forecast accuracy depends on the coverage and quality of observational data used to initialize numerical prediction models. This panel will explore how satellite measurements, improved modeling capabilities and advanced data assimilation systems may enable revolutionary advances in forecasting weather and natural hazards. Distinct from marine weather ocean weather is a new field that regards the oceans as dynamic and turbulent. The availability of ocean altimetry, ocean vector winds and ocean color satellite observations has led to this rethinking of ocean science that bring valuable new applications.

8:20
**TU1.210.1** **THE USE OF SATELLITE DATA IN OPERATIONAL NUMERICAL WEATHER PREDICTION MODELS: CURRENT STATUS AND FUTURE PLANS**
*Louis Uccellini*

8:53
**TU1.210.2** **ALL DATA ARE USEFUL, BUT NOT ALL DATA ARE USED! WHAT'S GOING ON HERE?**
*Ross Hoffman*

9:26
**TU1.210.3** **USING SATELLITE-DERIVED SST FRONTS TO EVALUATE AN EDDY RESOLVING NUMERICAL CIRCULATION MODEL**
*Peter Cornillon, Andrew Eichmann*



## TU1.101: Tuesday, July 8, 08:20 - 10:00

**TU1.101** **Subsurface Sensing I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 101
Co-Chairs: Waymond Scott and Paul Gader

8:20
**TU1.101.1** **THE ORFEUS PROJECT(OPTIMISED RADAR FOR FINDING EVERY UTILITY IN THE STREET)**
*Massimiliano Pieraccini*

8:40
**TU1.101.2** **DISPERSION INVERSION OF GPR DATA FOR PROPERTIES OF A MULTILAYER WAVEGUIDE**
*Jan van der Kruk, Robert Jacob*

9:00
**TU1.101.3** **GPR IMAGING USING COMPRESSED MEASUREMENTS**
*Ali Cafer Gurbuz, James H. McClellan, Waymond R. Scott*

9:20
**TU1.101.4** **COMBINING NSMC AND HIGH QUALITY MPV-TD DATA FOR UXO DISCRIMINATION**
*Fridon Shubitidze, Benjamin E. Barrowes, Irma Shamatava, Juan Pablo Fernández, Kevin O'Neill*

9:40
**TU1.101.5** **MATCHING PURSUITS DECOMPOSITION FOR DISCRIMINATION OF UNEXPLODED ORDNANCE: ISOLATED AND OVERLAPPING SIGNATURES**
*Jeremiah Remus, Leslie Collins*

## TU1.102: Tuesday, July 8, 08:20 - 10:00

**TU1.102** **Joint Time-Frequency Analysis of SAR**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 102
Co-Chairs: Paul Kersten and Laurent Ferro-Famil

8:20
**TU1.102.1** **SAR TRAFFIC MONITORING USING TIME-FREQUENCY ANALYSIS FOR DETECTION AND PARAMETER ESTIMATION**
*Stefan V. Baumgartner, Gerhard Krieger*

8:40
**TU1.102.2** **S-METHOD BASED APPROACH FOR IMAGE FORMATION, MOTION COMPENSATION, AND IMAGE ENHANCEMENT OF MOVING TARGERTS IN ISAR AND SAR**
*Thayananthan Thayaparan, Ljubisa Stankovic, Milos Dakovic*

9:00
**TU1.102.3** **LOCALIZATION OF VIBRATING TARGETS USING DUAL-FREQUENCY SYNTHETIC APERTURE RADAR AND TIME-FREQUENCY ANALYSIS**
*Yimin Zhang, Moeness Amin, Fauzia Ahmad*

9:20
**TU1.102.4** **COMPARISON OF POLARIMETRIC CONFIGURATIONS FOR THE TIME-FREQUENCY ANALYSIS OF URBAN AREAS AT L BAND**
*Laurent Ferro-Famil, Andreas Reigber, Jean-Claude Souyris*

9:40
**TU1.102.5** **ESTIMATING SURFACE WATER SPEEDS USING TIME-FREQUENCY ANALYSIS**
*Paul Kersten, Robert Jansen, Thomas Ainsworth, Jakov Toporkov, Mark Sletten*



## TU1.103: Tuesday, July 8, 08:20 - 10:00

**TU1.103** **Student Paper Prize Competition I**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 103
Co-Chairs: Martti Hallikainen and Leung Tsang

8:20
**TU1.103.1** **MULTIPLE-WINDOW ANOMALY DETECTION FOR HYPERSPECTRAL IMAGERY**
*Wei-Min Liu, Chein-I Chang*

8:40
**TU1.103.2** **MULTIPLE KERNEL DISCRIMINANT ANALYSIS AND DECISION FUSION FOR ROBUST SUB-PIXEL HYPERSPECTRAL TARGET RECOGNITION**
*Saurabh Prasad, Lori Bruce*

9:00
**TU1.103.3** **RETRIEVAL OF 3-D WATER VAPOR FIELD USING A NETWORK OF SCANNING COMPACT MICROWAVE RADIOMETERS**
*Sharmila Padmanabhan, Steven Reising, Jothiram Vivekanandan*

9:20
**TU1.103.4** **LOW FREQUENCY SEA AND ICE SHEET IMPULSE RESPONSES ACQUIRED BY THE GLOBAL ICE SHEET MAPPING ORBITER (GISMO) DEMONSTRATOR**
*Noppasin Niamsuwan, Joel Johnson*

9:40
**TU1.103.5** **TOWARD AN OPERATIONAL METHOD FOR REFINED SNOW CHARACTERIZATION USING DUAL-POLARIZATION C-BAND SAR DATA**
*Nicolas Longepe, Sophie Allain, Eric Pottier*

## TU1.104: Tuesday, July 8, 08:20 - 10:00

**TU1.104** **Passive Microwave Soil Moisture Algorithms**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 104
Co-Chairs: Paolo Pampaloni and Wade Crow

8:20
**TU1.104.1** **THE PROTOTYPE SMOS SOIL MOISTURE ALGORITHM**
*Yann Kerr, Philippe Waldteufel, Philippe Richaume, Jean Pierre Wigneron, Paolo Ferrazzoli, Arnaud Mailon, Ali Mahmoodi, Steven Delwart*

8:40
**TU1.104.2** **APPLICATION OF NEURAL NETWORKS TO SOIL MOISTURE RETRIEVALS FROM L-BAND RADIOMETRIC DATA**
*Emanuele Angiuli, Alessandra Monerris Belda, Fabio Del Frate*

9:00
**TU1.104.3** **IMPROVING THE AMSR-E SOIL MOISTURE ALGORITHM OF THE UNIVERSITY OF TOKYO THROUGH FIELD EXPERIMENTS AND PARAMETERS OPTIMIZATION**
*Hui Lu, Toshio Koike, Tetsu Ohta, Hydeyuki Fujii, Hiroyuki Tsutsui, Katsunori Tamagawa*

9:20
**TU1.104.4** **A FIVE-YEAR VALIDATION OF AMSR-E SOIL MOISTURE PRODUCTS**
*Thomas Jackson, Michael Cosh, Rajat Bindlish*

9:40
**TU1.104.5** **ESTIMATION OF SOIL MOISTURE WITH DUAL-FREQUENCY RADIOMETER - PALS**
*Jiancheng Shi, Eni Njoku, Thomas Jackson, Peggy O'Neill, Kun-Shan Chen*



## TU1.105: Tuesday, July 8, 08:20 - 10:00

**TU1.105** **Advanced Lidar Technologies and Applications to 3D Landcover Structure I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 105
Co-Chairs: Clint Slatton and David J. Harding

8:20
**TU1.105.1** **SEAFLOOR AND LAND COVER CLASSIFICATION THROUGH AIRBORNE LIDAR AND HYPERSPECTRAL DATA FUSION**
*Chris Macon, Jennifer Wozencraft*

8:40
**TU1.105.2** **A MEDIUM-FOOTPRINT, WAVEFORM LIDAR SURVEY OF GREENLAND**
*Michelle Hofton, J. Bryan Blair, David Rabine, Scott Luthcke*

9:00
**TU1.105.3** **PERFORMANCE PREDICTION FOR LOW-SNR LIDAR SENSORS**
*Tristan Cossio, Kris Shrestha, K. Clint Slatton, William E. Carter*

9:20
**TU1.105.4** **ROBUST EXTRACTION OF EXTERIOR BUILDING BOUNDARIES FROM TOPOGRAPHIC LIDAR DATA**
*Stephen Lach, John Kerekes*

9:40
**TU1.105.5** **3D ORGANIZATION OF 2D URBAN IMAGERY**
*Peter Cho*

## TU1.107: Tuesday, July 8, 08:20 - 10:00

**TU1.107** **Data Fusion I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 107
Co-Chairs: Jocelyn Chanussot and Paolo Gamba

8:20
**TU1.107.1** **AN ADAPTIVE SPECTRAL TRANSFORMATION APPROACH TO PAN-SHARPENING**
*Vijay Shah, Nick Younan, Roger King*

8:40
**TU1.107.2** **A REGULARIZATION APPROACH FOR INSAR AND OPTICAL DATA FUSION**
*Loic Denis, Florence Tupin, Jerome Darbon, Marc Sigelle*

9:00
**TU1.107.3** **HIGH-RESOLUTION RECONSTRUCTION OF MULTISPECTRAL IMAGERY BASED ON PANCHROMATIC IMAGERY**
*Sang-Hoon Lee*

9:20
**TU1.107.4** **SEMI-SUPERVISED CLASSIFIER ENSEMBLES FOR CLASSIFYING REMOTE SENSING DATA**
*Björn Waske, Jón Atli Benediktsson*

9:40
**TU1.107.5** **UNSUPERVISED CHANGE DETECTION IN HIGH RESOLUTION SATELLITE IMAGERY FROM FUSION OF SPECTRAL AND SPATIAL INFORMATION**
*Yonghong Li, Curt H. Davis*



## TU1.108: Tuesday, July 8, 08:20 - 10:00

**TU1.108** **New Challenges and Perspectives with High Resolution Spaceborne SAR Systems**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 108
Co-Chairs: Richard Bamler and Mario Costantini

8:20
**TU1.108.1** **HIGH BANDWIDTH SPOTLIGHT SAR INTERFEROMETRY WITH TERRASAR-X**
*Michael Eineder, Nico Adam, Nestor Yague-Martinez, Thomas Fritz*

8:40
**TU1.108.2** **HIGH RESOLUTION INTERFEROMETRIC STACKING WITH TERRASAR-X**
*Nico Adam, Michael Eineder, Nestor Yague-Martinez*

9:00
**TU1.108.3** **PRECISE ORBIT AND BASELINE DETERMINATION FOR TERRASAR-X AND TANDEM-X**
*Yongjin Moon, Rolf Koenig, Grzegorz Michalak, Markus Rothacher, Byron Tapley*

9:20
**TU1.108.4** **AUTOMATIC SHIP DETECTION: EXPERIMENTS AND POTENTIALS WITH THE COSMO-SKYMED SATELLITES CONSTELLATION**
*Luca Pietranera, Massimo Zavagli, Mario Costantini, Giovanni Valentini, Alessandro Coletta*

9:40
**TU1.108.5** **SAR INTERFEROMETRY POTENTIALS WITH HIGH RESOLUTION X-BAND SYSTEMS: ANALYSES AND EXPERIMENTS WITH COSMO-SKYMED DATA**
*Mario Costantini, Federico Minati, Fabio Malvarosa, Fabrizio Battazza, Alessandro Coletta*

## TU1.109: Tuesday, July 8, 08:20 - 10:00

**TU1.109** **Advances in Hyperspectral Applications: Application Developments for Hyperspectral Imaging Systems**

Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 109
Co-Chairs: Jay Pearlman and David Goodenough

8:20
**TU1.109.1** **VERY SHALLOW WATER BATHYMETRY RETRIEVAL FROM HYPERSPECTRAL IMAGERY AT THE VIRGINIA COAST RESERVE (VCR'07) MULTI-SENSOR CAMPAIGN**
*Charles Bachmann, Marcos Montes, Robert Fusina, Christopher Parrish, Jon Sellars, Alan Weidemann, Wesley Goode, Victoria Hill, Richard Zimmerman, C. Reid Nichols, Patrick Woodward, Kevin McIlhany, Daniel Korwan, Melba Crawford, James Monty, Barry Truitt, Arthur Schwarzschild*

8:40
**TU1.109.2** **COMPARISON OF AVIRIS AND AISA AIRBORNE HYPERSPECTRAL SENSING FOR ABOVE-GROUND FOREST CARBON MAPPING**
*David G. Goodenough, K. Olaf Niemann, Andrew Dyk, Geordie Hobart, Piper Gordon, Matthew Loisel, Hao Chen*

9:00
**TU1.109.3** **MEASUREMENT OF SUB NANOMETER SPECTRAL SHIFTS WITH A 10 NM IMAGING SPECTROMETER FOR UNDERSTANDING OF CHEMISTRY/COMPOSITIONAL VARIATION IN VEGETATION, MINERALS AND SNOW PACKS**
*Robert Green*

9:20
**TU1.109.4** **POTENTIAL UTILITY OF FUSED 3-D LADAR DATA AND HYPERSPECTRAL IMAGERY**
*Mark Folkman, John Shepanski, Christopher Folley*

9:40
**TU1.109.5** **MULTI-ANGLE MEASUREMENTS WITH CHRIS FOR FOREST PARAMETERS**
*Andrew Dyk, David G. Goodenough, K. Olaf Niemann, Anita Simic, Jing M. Chen, Geordie Hobart, Hao Chen*

## TU1.110: Tuesday, July 8, 08:20 - 10:00

**TU1.110** **Vegetation Biophysical Parameter Estimation I**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 110
Co-Chairs: Achilleas Psomas and Leland Pierce

8:20
**TU1.110.1** **EXPLORING THE BIOPHYSICAL DRIVERS OF AMAZON PHENEOLOGY: PREPARING DATA SETS TO IMPROVE DYNAMIC GLOBAL VEGETATION MODELS.**
*Andrew Bradley, France Gerard, Graham Weedon, Chris Huntingford, Przemyslaw Zelazowski, Liana Anderson, Nicolas Barbier, Luiz Eduardo O.C. de Aragão*

8:40
**TU1.110.2** **VALIDATION OF FOREST STRUCTURE RETRIEVALS FROM A GROUND-BASED LIDAR INSTRUMENT (ECHIDNA®)**
*Alan Strahler, Curtis E. Woodcock, Crystal Schaaf, Ranga Myneni, Jicheng Liu, Glenn J. Newnham, David L. B. Jupp, Darius S. Culvenor, Jenny L. Lovell, Wenge Ni-Meister, Shihyan Lee, Xiaowen Li, Feng Zhao, Xiaoyuan Yang, Tian Yao, Qingling Zhang, Mitchell Schull, Miguel O. Román III, Zhuosen Wang, Yanmin Shuai*

9:00
**TU1.110.3** **COMPARING FIELD MEASUREMENTS AND VEGETATION INDICES IN SUPPORT OF MODERATE RESOLUTION REMOTELY SENSED PHENOLOGY**
*Manish Verma, Mark Friedl, Nathan Phillips, Andrew Richardson*

9:20
**TU1.110.4** **UTILITY OF AN IMAGE-BASED CANOPY REFLECTANCE MODELING TOOL FOR REMOTE ESTIMATION OF LAI AND LEAF CHLOROPHYLL CONTENT IN CROP SYSTEMS**
*Rasmus Houborg, Martha C. Anderson*

9:40
**TU1.110.5** **SUBARCTIC BOREAL FOREST ALBEDO ESTIMATION USING ENVISAT ASAR FOR BRDF DETERMINATION**
*Terhikki Manninen, Aku Riihelä*

## TU1.111: Tuesday, July 8, 08:20 - 10:00

**TU1.111** **Frequency Allocation for Remote Sensing and Radio Frequency Interference Effects in Microwave Radiometry I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 111
Co-Chairs: Joel Johnson and David Kunkee

8:20
**TU1.111.1** **RESULTS FROM THE 2007 WORLD RADIOCOMMUNICATION CONFERENCE (WRC-07) FOR REMOTE SENSING AND A PREVIEW OF ISSUES FOR THE 2011 WRC**
*John Zuzek*

8:40
**TU1.111.2** **PULSE AND KURTOSIS DETECTION OF RADIO-FREQUENCY INTERFERENCE (RFI): AN EXPERIMENTAL COMPARISON**
*Priscilla N. Mohammed, Joseph Knuble, Jeffrey Piepmeier*

9:00
**TU1.111.3** **COMPARISON OF PULSED SINUSOID RFI DETECTION ALGORITHMS USING TIME AND FREQUENCY SUBSAMPLING**
*Sidharth Misra, Christopher Ruf*

9:20
**TU1.111.4** **ON THE SHAPIRO-WILK TEST FOR THE DETECTION OF PULSED SINUSOIDAL RADIO FREQUENCY INTERFERENCE**
*Baris Guner, Mark Frankford, Joel Johnson*

9:40
**TU1.111.5** **A STUDY OF ALGORITHMS FOR DETECTING PULSED SINUSOIDAL INTERFERENCE IN MICROWAVE RADIOMETRY**
*Joel Johnson, Lee Potter*



## TU1.203: Tuesday, July 8, 08:20 - 10:00

**TU1.203** **Synergism of Active and Passive Microwave Sensors I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 08:20 - 10:00
Place: Room 203
Co-Chairs: Tim Liu and David Weissman

8:20
**TU1.203.1** **THE EFFECT OF RAIN ON SATELLITE SENSOR ESTIMATES OF SURFACE ROUGHNESS CONDITIONS AND ON THE AIR-SEA MOMENTUM FLUX**
*David Weissman, Mark Bourassa*

8:40
**TU1.203.2** **THE AQUARIUS/SAC-D MICROWAVE INSTRUMENTS FOR MEASURING OCEAN SALINITY, THE WATER CYCLE AND OTHER APPLICATIONS**
*Gary Lagerloef, F. Raul Colomb, David Le Vine, Simon Yueh, Frank Wentz*

9:00
**TU1.203.3** **COMPENSATION OF FARADAY ROTATION IN MULTI-POLARIZATION SCATTEROMETRY**
*Mark Frankford, Joel Johnson*

9:20
**TU1.203.4** **ACTIVE-PASSIVE OBSERVATIONS OF SOIL MOISTURE - IMPLEMENTATION CONCEPT FOR THE SMAP MISSION**
*Eni Njoku, Dara Entekhabi, Peggy O'Neill*

9:40
**TU1.203.5** **VALIDATION OF COARSE RESOLUTION MICROWAVE SOIL MOISTURE PRODUCTS**
*Zoltan Bartalis, Wolfgang Wagner, Craig Anderson, Hans Bonekamp, Vahid Naeimi, Stefan Hasenauer*

## TU2.101: Tuesday, July 8, 10:20 - 12:00

**TU2.101** **Subsurface Sensing II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 101
Co-Chairs: Waymond Scott and Paul Gader

10:20
**TU2.101.1** **HIERARCHICAL METHODS FOR LANDMINE DETECTION WITH WIDEBAND ELECTRO-MAGNETIC INDUCTION AND GROUND PENETRATING RADAR MULTI-SENSOR SYSTEMS.**
*Paul Gader, Joseph Wilson, Dominic Ho, Seniha Yuksel, Ganesh Ramachandran, Gyeongyong Heo*

10:40
**TU2.101.2** **DUAL SENSOR ALIS FOR HUMANITARIAN DEMINING AND ITS EVALUATION TEST IN MINE FIELDS IN CROATIA**
*Motoyuki Sato*

11:00
**TU2.101.3** **THERMAL NOISE ANALYSIS ON THE RESISTIVE VEE DIPOLE ANTENNA FOR GROUND-PENETRATING RADAR APPLICATIONS**
*Kangwook Kim*

11:20
**TU2.101.4** **SUBSURFACE SENSING OF NEAR-SURFACE OBJECT USING CAVITY BACKED SLOT ANTENNA**
*Suman Kumar Gunnala, Mingyu Lu, Jonathan Bredow, Saibun Tjuatja*

11:40
**TU2.101.5** **GRAVIMETRIC DETECTION BY COMPRESSED SENSING**
*Marina Meila, Caren Marzban, Ulvi Yurtsever*

## TU2.102: Tuesday, July 8, 10:20 - 12:00

**TU2.102** **TerraSAR-X Commissioning Phase Results**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 102
Co-Chairs: Josef Mittermayer and Thomas Fritz

10:20
**TU2.102.1** **TERRASAR-X COMMISSIONING PHASE EXECUTION AND RESULTS**
*Josef Mittermayer, Schättler Birgit, Marwan Younis*

10:40
**TU2.102.2** **TERRASAR-X INSTRUMENT, SAR SYSTEM PERFORMANCE AND COMMAND GENERATION**
*Josef Mittermayer, Robert Metzig, Ulrich Steinbrecher, Carolina Gonzalez, Donata Polimeni, Johannes Böer, Younis Marwan, José Márquez Martínez, Steffen Wollstadt, Daniel Schulze, Adriano Meta, Nuria Tous-Ramon, Carlos Ortega Miguez*

11:00
**TU2.102.3** **TERRASAR-X CALIBRATION RESULTS**
*Marco Schwerdt, Benjamin Bräuitigam, Markus Bachmann, Björn Döring, Dirk Schrank, Jaime Hueso Gonzalez*

11:20
**TU2.102.4** **TERRASAR-X PAYLOAD DATA PROCESSING: RESULTS FROM COMMISSIONING AND EARLY OPERATIONAL PHASE**
*Helko Breit, Birgit Schättler, Thomas Fritz, Ulrich Balss, Heiko Damerow, Egbert Schwarz*

11:40
**TU2.102.5** **TERRASAR-X IMAGE PRODUCTS: CHARACTERIZATION AND VERIFICATION**
*Thomas Fritz, Helko Breit, Birgit Schättler, Marie Lachaise, Ulrich Balss, Michael Eineder*

## TU2.103: Tuesday, July 8, 10:20 - 12:00

**TU2.103** **Student Paper Prize Competition II**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 103
Co-Chairs: Martti Hallikainen and Leung Tsang

10:20
**TU2.103.1** **A NOVEL STRATEGY FOR RADAR IMAGING BASED ON COMPRESSIVE SENSING**
*Marivi Tello, Paco López-Dekker, Jordi J. Mallorqui*

10:40
**TU2.103.2** **VOLUME COHERENCE ESTIMATION FOR RANDOM FOREST HEIGHT RETRIEVAL BASED ON POLINSAR DATA**
*Tao Xiong, Guangyi Zhou, Jian Yang, Weijie Zhang*

11:00
**TU2.103.3** **INVESTIGATION OF A NEW MULTIFUNCTIONAL HIGH PERFORMANCE SAR SYSTEM CONCEPT EXPLOITING MIMO TECHNOLOGY**
*Junghyo Kim, Werner Wiesbeck*

11:20
**TU2.103.4** **ON THE USE OF DUAL-POLARIZED SAR DATA FOR OIL SPILL OBSERVATION WITH AND WITHOUT SURFACE SLICKS**
*Ferdinando Nunziata, Attilio Gambardella, Maurizio Migliaccio*

11:40
**TU2.103.5** **ENHANCEMENT OF ALONG-TRACK INTERFEROMETRY FOR GROUND MOVING TARGET INDICATION**
*Robert Kohlleppel, Christoph H. Gierull*



## TU2.104: Tuesday, July 8, 10:20 - 12:00

**TU2.104** **Tower and Aircraft Soil Moisture Remote Sensing**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 104
Co-Chairs: Brian Hornbuckle and Jeff Walker

10:20
**TU2.104.1** **SOIL MOISTURE RETRIEVAL USING AN L-BAND SYNTHETIC APERTURE RADIOMETER DURING THE SOIL MOISTURE EXPERIMENTS 2003 (SMEX03) AND 2004 (SMEX04)**
*Dongryeol Ryu, Thomas Jackson, Rajat Bindlish, David Le Vine, Michael Haken*

10:40
**TU2.104.2** **COMBINED PASSIVE AND ACTIVE SOIL MOISTURE OBSERVATIONS DURING CLASIC**
*Rajat Bindlish, Thomas Jackson, Simon Yueh, Steve Dinardo*

11:00
**TU2.104.3** **NEAR REAL-TIME PASSIVE C-BAND MICROWAVE SOIL MOISTURE RETRIEVAL DURING CLASIC 2007**
*Eric McIntyre, Albin Gasiewski, Damian Manda*

11:20
**TU2.104.4** **PASSIVE AND ACTIVE L-BAND SYSTEM AND OBSERVATIONS DURING THE 2007 CLASIC CAMPAIGN**
*Simon Yueh, Steve Dinardo, Steven Chan, Eni Njoku, Thomas Jackson, Rajat Bindlish*

11:40
**TU2.104.5** **SOIL MOISTURE RETRIEVAL USING GNSS-R TECHNIQUES: MEASUREMENT CAMPAIGN IN A WHEAT FIELD**
*Nereida Rodríguez-Álvarez, Juan Fernando Marchán-Hernandez, Adriano Camps, Enric Valencia, Xavier Bosch-Lluis, Isaac Ramos-Pérez, Juan Manuel Nieto*

## TU2.105: Tuesday, July 8, 10:20 - 12:00

**TU2.105** **Lidar Sensors and Applications I**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 105
Co-Chairs: Raymond Hoff and Michelle Hofton

10:20
**TU2.105.1** **QUANTIFYING SURFACE REFLECTIVITY FOR SPACEBORNE LIDAR MISSIONS**
*Mathias Disney, Philip Lewis*

10:40
**TU2.105.2** **A PREPROCESSING METHOD FOR AUTOMATIC BREAKLINES DETECTION**
*Mohammed Yassine Belkhouche, Bill P. Buckles, Xiaohui Yuan, Laura Steinberg*

11:00
**TU2.105.3** **FOURIER ERROR ANALYSIS OF RAY TRACING ON A GEOSPATIAL POLYGONAL MODEL**
*Brandon Baker*

11:20
**TU2.105.4** **ESTIMATING AND MONITORING LAI AND FOLIAGE PROFILES USING GROUND-BASED LASER SCANNING**
*Glenn J. Newnham, David L. B. Jupp, Darius S. Culvenor, Jenny L. Lovell*

11:40
**TU2.105.5** **RETRIEVAL OF CANOPY VERTICAL STRUCTURE USING MODIS DATA**
*Zhuosen Wang, Crystal Schaaf, Yuri Knyazikhin, Tian Yao, Mitchell Schull, Alan Strahler*



## TU2.107: Tuesday, July 8, 10:20 - 12:00

**TU2.107** **Data Fusion II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 107
Co-Chairs: Jocelyn Chanussot and Paolo Gamba

10:20
**TU2.107.1** **A METHOD FOR MEASURING THE INCREMENTAL INFORMATION CONTRIBUTED FROM NON-STATIONARY SPATIO-TEMPORAL DATA TO BE FUSED**
*Carolyn Krekeler, Karthik Nagarajan, K. Clint Slatton*

10:40
**TU2.107.2** **A NOVEL PROTOCOL FOR ACCURACY ASSESSMENT IN CLASSIFICATION OF VERY HIGH RESOLUTION MULTISPECTRAL AND SAR IMAGES**
*Lorenzo Bruzzone, Claudio Persello*

11:00
**TU2.107.3** **MULTIRESOLUTION FUSION IN REMOTELY SENSED IMAGES USING AN IGMRF PRIOR AND MAP ESTIMATION**
*Manjunath Joshi, André Jalobeanu*

11:20
**TU2.107.4** **A ROBUST MULTI-CLASSIFIER DECISION FUSION FRAMEWORK FOR HYPERSPECTRAL, MULTI-TEMPORAL CLASSIFICATION**
*Saurabh Prasad, Lori Bruce, Hemanth Kalluri*

11:40
**TU2.107.5** **CLASSIFICATION OF HIGH-RESOLUTION IMAGES BASED ON MRF FUSION AND MULTISCALE SEGMENTATION**
*Gabriele Moser, Sebastiano Serpico*

## TU2.108: Tuesday, July 8, 10:20 - 12:00

**TU2.108** **Spatial Data Fusion in PolSAR and Pol-InSAR Imaging**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 108
Co-Chairs: Wooil M. Moon and Yoshio Yamaguchi

10:20
**TU2.108.1** **DATA FUSION STUDY BETWEEN POLARIMETRIC SAR, HYPERSPECTRAL AND LIDAR DATA FOR FOREST INFORMATION**
*David G. Goodenough, Hao Chen, Andrew Dyk, Geordie Hobart, Ashlin Richardson*

10:40
**TU2.108.2** **IMAGING CRUSTAL DEFORMATION ALONG THE SAN ANDREAS FAULT SYSTEM WITH ALOS INSAR AND GPS**
*David Sandwell, Bridget Smith-Konter, Matt Wei*

11:00
**TU2.108.3** **SCATTERING TYPE PHASE FOR WETLAND CLASSIFICATION USING C-BAND POLARIMETRIC SAR**
*Ridha Touzi, Alice Deschamps, Gershon Rother*

11:20
**TU2.108.4** **SEASONAL CHANGE MONITORING OF WETLANDS BY USING AIRBORNE AND SATELLITE POLSAR SENSING**
*Ryoichi Sato, Yoshio Yamaguchi, Hiroyoshi Yamada, Wolfgang-Martin Boerner*

11:40
**TU2.108.5** **RECENT ADVANCES IN POL-SAR & POL-IN-SAR IMAGING OF NATURAL HABITATS AND WETLAND REMOTE SENSING**
*Wolfgang-Martin Boerner, Yoshio Yamaguchi*



## TU2.109: Tuesday, July 8, 10:20 - 12:00

**TU2.109** **Advances in Hyperspectral Applications: Hyperspectral Sensing of Forests**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 109
Co-Chairs: Robert Green and Jay Pearlman

10:20
**TU2.109.1** **SOIL BACKGROUNDS ARTIFACTS ANALYSIS ON CHLOROPHYLL INDICES USING AIRBORNE (PROBE-1) AND SATELLITE (HYPERION EO-1) HYPERSPECTRAL DATA IN PRECISION AGRICULTURE**
*Abdou Bannari, Karl Staenz, Driss Haboudane*

10:40
**TU2.109.2** **HYPERSPECTRAL ANALYSIS OF JAPANESE OAK WILT TO DETERMINE NORMALIZED WILT INDEX**
*Kuniaki Uto, Yuji Takabayashi, Yukio Kosugi, Toshinari Ogata*

11:00
**TU2.109.3** **VEGETATION SPECIES IDENTIFICATION USING HYPERSPECTRAL IMAGERY AND A PROGRESSIVE ANALYSIS**
*Baoxin Hu, James Freemantle, Josee Levesque, Jean Pierre Ardouin*

11:20
**TU2.109.4** **ASSESSING CROP RESIDUE COVER USING HYPERION DATA**
*James Monty, Craig Daughtry, Melba Crawford*

11:40
**TU2.109.5** **TOXIC INDUSTRIAL CHEMICAL EFFECTS ON POPLAR, CANOLA, AND WHEAT DETECTABLE OVER THE 450 – 2500 NM SPECTRAL RANGE.**
*Derek Rogge, Benoit Rivard, Mike Deyholos, Josee Levesque, Anthony Faust*

## TU2.110: Tuesday, July 8, 10:20 - 12:00

**TU2.110** **Vegetation Biophysical Parameter Estimation II**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 110
Co-Chairs: Andrew Bradley and Leland Pierce

10:20
**TU2.110.1** **RELATING A SPECTRAL INDEX FROM MODIS AND TOWER-BASED MEASUREMENTS TO ECOSYSTEM LIGHT USE EFFICIENCY FOR A FLUXNET-CANADA CONIFEROUS FOREST**
*Elizabeth Middleton, Yen-Ben Cheng, Thomas Hilker, Karl Huemmrich, Andrew Black, Praveena Krishnan, Nicholas Coops*

10:40
**TU2.110.2** **SIMULTANEOUS ESTIMATION OF SURFACE PHOTOSYNTHETICALLY ACTIVE RADIATION AND ALBEDO FROM GOES**
*Kaicun Wang, Shunlin Liang, Dongdong Wang, Tao Zheng*

11:00
**TU2.110.3** **COUPLING IMAGING SPECTROSCOPY AND ECOSYSTEM PROCESS MODELLING - THE IMPORTANCE OF SPATIALLY DISTRIBUTED FOLIAR BIOCHEMICAL CONCENTRATION ESTIMATES FOR MODELLING NPP OF GRASSLAND HABITATS**
*Achilleas Psomas, Mathias Kneubühler, Silvia Huber, Klaus Itten, Niklaus Zimmermann*

11:20
**TU2.110.4** **LONG TERM GLOBAL LAI DATASET FROM AVHRR: EVALUATION AND VALIDATION**
*Sangram Ganguly, Arindam Samanta, Mitchell Schull, Nikolay Shabanov, Yuri Knyazikhin, Ranga Myneni*

11:40
**TU2.110.5** **VALIDATING PREDICTIVE ABILITY OF SPECTRAL INDICES FOR PHOTOSYNTHETIC EFFICIENCY AND CAPACITY - ANALYSIS OF HYPERSPECTRAL AND CO2 FLUX MEASUREMENTS IN RICE FIELD -**
*Yoshio Inoue, Josep Penuelas, Akira Miyata, Masami Mano*

## TU2.111: Tuesday, July 8, 10:20 - 12:00

**TU2.111** **Frequency Allocation for Remote Sensing and Radio Frequency Interference Effects in Microwave Radiometry II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 111
Co-Chairs: Joel Johnson and David Kunkee

10:20
**TU2.111.1** **THE DETECTION AND MITIGATION OF RFI WITH THE AQUARIUS L-BAND SCATTEROMETER**
*Adam Freedman, Jeffrey Piepmeier, Mark Fischman, Dalia McWatters, Michael Spencer*

10:40
**TU2.111.2** **RFI MEASUREMENT DATABASE ASSEMBLED DURING THE SQUARE KILOMETRE ARRAY SITE QUALIFICATION CAMPAIGNS.**
*Michael Inggs, Sydney Dunn, Justin Jonas*

11:00
**TU2.111.3** **A SIMPLIFIED CALCULATION OF THE KURTOSIS FOR RFI DETECTION**
*Roger De Roo*

11:20
**TU2.111.4** **EFFECTIVENESS OF THE SIXTH MOMENT TO ELIMINATE A KURTOSIS BLIND SPOT IN THE DETECTION OF INTERFERENCE IN A RADIOMETER.**
*Roger De Roo, Sidharth Misra*

11:40
**TU2.111.5** **DETECTABILITY OF RADIO FREQUENCY INTERFERENCE DUE TO SPREAD SPECTRUM COMMUNICATION SIGNALS USING THE KURTOSIS ALGORITHM**
*Sidharth Misra, Christopher Ruf, Rachael Kroodsma*

## TU2.203: Tuesday, July 8, 10:20 - 12:00

**TU2.203** **Synergism of Active and Passive Microwave Sensors II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 203
Co-Chairs: David Weissman and W Timothy Liu

10:20
**TU2.203.1** **CROSS-VALIDATION OF WIND PRODUCTS FROM SEAWINDS AND AMSR ON ADEOS-II**
*Naoto Ebuchi*

10:40
**TU2.203.2** **THE INFLUENCE OF AIR DENSITY ON SCATTEROMETER RETRIEVALS OF SURFACE TURBULENT STRESS**
*Mark Bourassa, David Weissman*

11:00
**TU2.203.3** **OCEAN-ATMOSPHERE COUPLING OVER MID-LATITUDE OCEAN FRONTS**
*W.Timothy Liu, Xiaosu Xie*

11:20
**TU2.203.4** **DYNAMIC PHENOMENA IN THE COASTAL WATERS OF THE NORTH-EASTERN BLACK SEA RETRIEVED FROM SATELLITE DATA**
*Marina Mityagina, Olga Lavrova*

11:40
**TU2.203.5** **ADVANCED LAND OBSERVING SATELLITE PALSAR OBSERVATIONS OF THE OCEANIC DYNAMIC PHENOMENA IN THE COASTAL ZONE**
*Leonid Mitnik*



## TU2.210: Tuesday, July 8, 10:20 - 12:00

**TU2.210** **Assimilation of Satellite Radiances**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 10:20 - 12:00
Place: Room 210
Co-Chairs: Albin Gasiewski and Klaus Scipal

10:20
**TU2.210.1** **MICROWAVE AND INFRARED RADIANCES ASSIMILATION FOR WEATHER FORECASTING**
*Quanhua (Mark) Liu, Fuzong Weng, Yong Han, Yong Chen*

10:40
**TU2.210.2** **STOCHASTIC GENERATION OF CONDITIONAL PRECIPITATION REPLICATES FOR ENSEMBLE FORECASTING AND DATA ASSIMILATION.**
*Rafal Wojcik, Alexandra Konings, Dennis McLaughlin, Dara Entekhabi*

11:00
**TU2.210.3** **ERROR MODELING RELATED TO MICROWAVE RADIANCE ASSIMILATION OF CLOUDS AND PRECIPITATION**
*Ralf Bennartz, Mark Kulie, Christopher O'Dell, Min-Jeong Kim*

11:20
**TU2.210.4** **TOWARD ASSIMILATION OF MWR TBS INTO CRM: ENSEMBLE FORECAST ERROR DISTRIBUTION AND COVARIANCE OF CRM VARIABLES AND TBS**
*Kazumasa Aonashi*

11:40
**TU2.210.5** **DATA ASSIMILATION EXPERIMENTS USING QUALITY CONTROLLED AIRS VERSION 5 TEMPERATURE SOUNDINGS**
*Joel Susskind*

## TU3.101: Tuesday, July 8, 13:20 - 15:00

**TU3.101** **Remote Sensing for Landmine and Unexploded Ordnance Identification and Removal I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 101
Co-Chairs: Leslie Collins and Joseph Wilson

13:20
**TU3.101.1** **TECHNOLOGIES FOR AIRBORNE MINEFIELD DETECTION**
*Miranda Schatten Silvious*

13:40
**TU3.101.2** **THE BENEFITS OF CONTEXT ESTIMATION FOR TARGET SPECTRA DETECTION IN HYPERSPECTRAL IMAGERY**
*Jeremy Bolton, Paul Gader*

14:00
**TU3.101.3** **STATISTICAL MODELS FOR GROUND PENETRATING RADAR: APPLICATIONS TO SYNTHETIC DATA GENERATION AND STATISTICAL PRE-SCREENING**
*Peter Torrione, Leslie Collins*

14:20
**TU3.101.4** **CONTEXT-DEPENDENT MULTI-SENSOR FUSION FOR LANDMINE DETECTION**
*Hichem Frigui, Lijun Zhang, Paul Gader*

14:40
**TU3.101.5** **BROADBAND ARRAY OF ELECTROMAGNETIC INDUCTION SENSORS FOR DETECTING BURIED LANDMINES**
*Waymond R. Scott*



## TU3.102: Tuesday, July 8, 13:20 - 15:00

**TU3.102** **TerraSAR-X satellite: Status and First Application Results I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 102
Co-Chairs: Achim Roth and Irena Hajnsek

13:20
**TU3.102.1** **STATUS REPORT ON THE TERRASAR-X MISSION**
*Stefan Buckreuss, Roth Achim*

13:40
**TU3.102.2** **RAPID LAND MAPPING BY TERRASAR-X VHR DATA**
*Gianni Lisini, Fabio Dell'Acqua, Paolo Gamba*

14:00
**TU3.102.3** **TERRASAR-X MULTI-SCALE TEXTURAL ANALYSIS FOR URBAN CLASSIFICATION**
*Marco Chini, Fabio Pacifici, William J. Emery*

14:20
**TU3.102.4** **EXPLORING THE POLIMETRIC MODES OF TERRASAR-X FOR QUANTIATIVE PARAMETER ESTIMATION**
*Irena Hajnsek, Konstantinos Papathanassiou*

14:40
**TU3.102.5** **ASSESSMENT OF THE POTENTIAL OF TERRASAR-X WITH RESPECT TO MAPPING APPLICATIONS USING RADARGRAMMETRIC AND INTERFEROMETRIC TECHNIQUES**
*Hannes Raggam, Karlheinz Gutjahr, Mathias Schardt*

## TU3.103: Tuesday, July 8, 13:20 - 15:00

**TU3.103** **Ionospheric Effects in Polarimetric and Interferometric SAR Imagery I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 103
Co-Chairs: Tom Ainsworth and Tony Freeman

13:20
**TU3.103.1** **DISCOVERY OF ANOMALOUS STRIPES OVER THE AMAZON BY THE PALSAR ONBOARD ALOS SATELLITE**
*Masanobu Shimada, Yasushi Muraki, Yuichi Otsuka*

13:40
**TU3.103.2** **EVALUATION OF GPS VS. POLARIMETRY BASED APPROACHES FOR CORRECTION OF FARADAY ROTATION IN SAR DATA**
*Anthony Freeman, Xiaoqing Pi, Elaine Chapin, Bruce Chapman*

14:00
**TU3.103.3** **A POSTERIORI POLARIMETRIC CALIBRATION: COMPENSATING FOR FARADAY ROTATIONS AND IONOSPHERE IRREGULARITIES**
*Thomas Ainsworth, Tony Freeman, Jong-Sen Lee*

14:20
**TU3.103.4** **THE IMPACT OF THE IONOSPHERE ON INTERFEROMETRIC SAR PROCESSING**
*Franz Meyer, Jeremy Nicoll*

14:40
**TU3.103.5** **DETECTION OF IONOSPHERIC STRUCTURES WITH L-BAND SYNTHETIC APERTURE RADARS**
*Paul Bernhardt, Thomas Ainsworth, Keith Groves*



## TU3.104: Tuesday, July 8, 13:20 - 15:00

**TU3.104** **Radar Remote Sensing of Soil Moisture**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 104
Co-Chairs: Jiancheng Shi and Franchesco Mattia

13:20
**TU3.104.1** **A VEGETATION CORRECTION METHODOLOGY FOR TIME SERIES BASED SOIL MOISTURE RETRIEVAL FROM C-BAND RADAR OBSERVATIONS**
*Alicia Joseph, Peggy O'Neill, Rogier van der Velde, Roger Lang, Timothy Gish*

13:40
**TU3.104.2** **C- AND L-BAND POLARIMETRIC DATA FOR SOIL MOISTURE ESTIMATION OVER AGRICULTURAL FIELDS**
*Eric Gauthier, Heather McNairn, Jiali Shang, Anna Pacheco, Catherine Champagne, Ridha Touzi*

14:00
**TU3.104.3** **INVERSION ALGORITHM FOR SOIL MOISTURE RETRIEVAL FROM POLARIMETRIC BACKSCATTERING COEFFICIENTS OF VEGETATION CANOPIES**
*Yisok Oh, Seung-Gun Jung*

14:20
**TU3.104.4** **SOIL MOISTURE ESTIMATION AND ANALYSIS IN WESTERN AFRICA BASED ON ERS SCATTEROMETER**
*Mehrez Zribi, Mickaël Pardé, Bertrand Decharme, Patricia De Rosnay*

14:40
**TU3.104.5** **SURFACE PARAMETER ESTIMATION OVER PERIODIC SURFACES USING TIME-FREQUENCY APPROACH**
*Sandrine Daniel, Sophie Allain, Laurent Ferro-Famil, Eric Pottier*

## TU3.105: Tuesday, July 8, 13:20 - 15:00

**TU3.105** **EARLINET -- The European Aerosol Research Lidar Network I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 105
Co-Chairs: Raymond M. Hoff and Arnoud Apituley

13:20
**TU3.105.1** **THE EUROPEAN AEROSOL RESEARCH LIDAR NETWORK (EARLINET): AN OVERVIEW**
*Francesc Rocadenbosch, Ina Mattis, Christine Böckmann, Gelsomina Pappalardo, Jens Bösenberg, Lucas Alados-Arboledas, Aldo Amodeo, Albert Ansmann, Arnoud Apituley, Dimitris Balis, Anatoly Chaikovsky, Adolfo Comerón, Volker Freudenthaler, Ove Gustafsson, Georg Hansen, Rodanthi-Elisabeth Mamouri, Valentin Mitev, Constantino Muñoz, Doina Nicolae, Alexandros Papayannis, Carlos Pérez, Maria Rita Perrone, Aleksander Pietruczuk, Manuel Pujadas, Jean-Philippe Putaud, Francois Ravetta, Vincenzo Rizi, Michaël Sicard, Valentin Simeonov, Nicola Spinelli, Dimitar Stoyanov, Thomas Trickl, Ulla Wandinger, Matthias Wiegner*

13:40
**TU3.105.2** **EARLINET APPROACH TO OPTIMISATION OF INDIVIDUAL NETWORK INSTRUMENTS WITH THE AIM OF HOMOGENISATION OF AEROSOL DATA PRODUCTS AND INCREASED DATA COVERAGE**
*Arnoud Apituley, Volker Freudenthaler, Francesc Rocadenbosch*

14:00
**TU3.105.3** **BACKSCATTER LIDAR MEASUREMENT IN THE ATMOSPHERIC BOUNDARY LAYER : DATA ANALYSIS AND INTERPRETATION CAPABILITIES**
*Valentin Mitev, Renaud Matthey, Giovanni Martucci*

14:20
**TU3.105.4** **FROM EARLINET-ASOS RAMAN-LIDAR SIGNALS TO MICROPHYSICAL PROPERTIES VIA ADVANCED REGULARIZATION SOFTWARE**
*Christine Böckmann, Detlef Müller, Lukas Osterloh, Pornsarp Pornsawad*

14:40
**TU3.105.5** **THE GAW AEROSOL LIDAR OBSERVATION NETWORK (GALION)**
*Raymond Hoff, Jens Boesenberg, Gelsomina Pappalardo*

## TU3.107: Tuesday, July 8, 13:20 - 15:00

**TU3.107** **Urban Areas and Buildings**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 107
Co-Chairs: Roger King and Gintautas Palubinskas

13:20
**TU3.107.1** **DETECTION OF TRAFFIC CONGESTION IN OPTICAL REMOTE SENSING IMAGERY**
*Gintautas Palubinskas, Franz Kurz, Peter Reinartz*

13:40
**TU3.107.2** **CARTOGRAPHIC ELEMENTS EXTRACTION USING HIGH RESOLUTION REMOTE SENSING IMAGERY AND XML MODELING**
*Erick Lopez-Ornelas, Florence Sedes*

14:00
**TU3.107.3** **AUTOMATED ROAD EXTRACTION USING BOTH GENETIC ALGORITHMS AND CLUSTERING ANALYSIS FROM PAN-SHARPENED IKONOS IMAGES**
*Hesamodin Dehghanian, Mohammad Javad Valadan Zoej, Hamid Ebadi, Mehdi Mokhtarzadeh*

14:20
**TU3.107.4** **SEQUENTIAL CORRESPONDENCE OF MULTIPLE VISUAL CUES FOR 3-D BUILDING RECONSTRUCTION**
*Dong Guo, Chye Hwang Yan, Soo Chin Liew, Leong Keong Kwoh*

14:40
**TU3.107.5** **CONTEXTUAL MODELS FOR AUTOMATIC BUILDING EXTRACTION IN HIGH RESOLUTION REMOTE SENSING IMAGE USING OBJECT-BASED BOOSTING METHOD**
*Xian Sun, Kun Fu, Hui Long, Yanfeng Hu, Lun Cai, Hongqi Wang*

## TU3.108: Tuesday, July 8, 13:20 - 15:00

**TU3.108** **Multichannel - Multidimensional Coherent SAR Data Combination Techniques I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 108
Co-Chairs: Fabrizio Lombardini and Alessandro Ferretti

13:20
**TU3.108.1** **ON THE MINIMUM NUMBER OF TRACKS FOR SAR TOMOGRAPHY**
*Matteo Nannini, Rolf Scheiber, Alberto Moreira*

13:40
**TU3.108.2** **COMBINING TIME-DOMAIN BACK-PROJECTION AND ADVANCED SPECTRAL ESTIMATION METHODS FOR TOMOGRAPHIC SAR PROCESSING**
*Othmar Frey, Erich Meier*

14:00
**TU3.108.3** **A NEW METHOD FOR IDENTIFICATION AND ANALYSIS OF PERSISTENT SCATTERERS IN SERIES OF SAR IMAGES**
*Mario Costantini, Salvatore Falco, Fabio Malvarosa, Federico Minati*

14:20
**TU3.108.4** **DETECTION OF SINGLE AND MULTIPLE SCATTERERS IN MULTIBASELINE MULTITEMPORAL SAR DATA**
*Gianfranco Fornaro, Fabrizio Lombardini, Matteo Pardini, Antonio Pauciullo*

14:40
**TU3.108.5** **3D TOMOGRAPHIC AND DIFFERENTIAL TOMOGRAPHIC RESPONSE TO PARTIALLY COHERENT SCENES**
*Fabrizio Lombardini*



## TU3.109: Tuesday, July 8, 13:20 - 15:00

**TU3.109** **Rare Target Detection in Hyperspectral Imagery I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 109
Co-Chairs: Alan Schaum and James Theiler

13:20
**TU3.109.1** **LEVERAGING CONVEXITY IN THE FACE OF HIGH DIMENSIONALITY TO DETECT, QUANTIFY AND IDENTIFY RARE AND SMALL TARGETS**
*Joseph Boardman*

13:40
**TU3.109.2** **IMAGE FACTORIZATION FOR SMALL OBJECT DETECTION**
*Michael Winter*

14:00
**TU3.109.3** **HYPERSPECTRAL DETECTION AND IDENTIFICATION WITH CONSTRAINED TARGET SUBSPACES**
*Steven Adler-Golden, John Gruninger, Robert Sundberg*

14:20
**TU3.109.4** **CLUTTER REMOVAL VIA TOPOLOGY FOR IMPROVED TARGET DETECTION IN HYPERSPECTRAL IMAGERY**
*Bill Basener, David Messinger*

14:40
**TU3.109.5** **ANOMALOUS CHANGE DETECTION IN LONGWAVE INFRARED GROUND-BASED HYPERSPECTRAL IMAGING DATA**
*Kevin Mitchell*

## TU3.110: Tuesday, July 8, 13:20 - 15:00

**TU3.110** **Forests and Vegetation: SAR Interferometry and Polarimetry I**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 110
Co-Chairs: Paul Siqueira and Robert Treuhaft

13:20
**TU3.110.1** **SAR COHERENCE TOMOGRAPHY FOR BOREAL FOREST WITH AID OF LASER MEASUREMENTS**
*Jaan Praks, Florian Kugler, Konstantinos Papathanassiou, Juha Hyyppä, Martti Hallikainen*

13:40
**TU3.110.2** **ANALYSIS OF TEMPORAL DECORRELATION IN DUAL-BASELINE POLINSAR VEGETATION PARAMETER ESTIMATION**
*Yong-Sheng Zhou, Wen Hong, Fang Cao, Yan-Ping Wang, Yi-Rong Wu*

14:00
**TU3.110.3** **MODELING AND INTERPRETATION OF THE MULTITEMPORAL AND MULTIBASELINE POLINSAR COHERENCE**
*Maxim Neumann, Laurent Ferro-Famil, Andreas Reigber*

14:20
**TU3.110.4** **TEMPORAL DECORRELATION STUDIES FOR VEGETATION PARAMETER ESTIMATION WITH SPACEBORNE RADARS**
*Razi Ahmed, Paul Siqueira, Scott Hensley, Bruce Chapman, Kathleen Bergen*



## TU3.111: Tuesday, July 8, 13:20 - 15:00

**TU3.111** **Microwave Radiometer Technology I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 111
Co-Chairs: Steven Reising and Adriano Camps

13:20
**TU3.111.1** **DESIGN AND DEVELOPMENT OF THE HURRICANE IMAGING RADIOMETER (HIRAD)**
*Christopher Ruf, M. C. Bailey, Roger De Roo, Steven Gross, Robbie Hood, Mark James, James Johnson, W. Linwood Jones, David Simmons, Karen Stephens*

13:40
**TU3.111.2** **THE ROLE OF GRAPHICS SIMULATION IN EARLY DEVELOPMENT OF THE NPOESS MICROWAVE IMAGER SOUNDER (MIS) SENSOR CONCEPT**
*David Kunkee*

14:00
**TU3.111.3** **THE AQUARIUS MICROWAVE RADIOMETERS**
*Fernando Pellerano, Jeffrey Piepmeier, James Caldwell, Terence Doiron, Joshua Forgione, Kevin Horgan, Michael Triesky, David Levine, Simon Yueh, Gary Lagerloef*

14:20
**TU3.111.4** **RETRIEVAL OF 3-D WATER VAPOR FIELD USING A REMOTE SENSOR NETWORK OF SCANNING COMPACT MICROWAVE RADIOMETERS**
*Sharmila Padmanabhan, Steven Reising, Jothiram Vivekanandan, Flavio Iturbide-Sanchez, Willow Foster*

14:40
**TU3.111.5** **INITIAL RESULTS OF A DIGITAL RADIOMETER WITH DIGITAL BEAMFORMING**
*Xavier Bosch-Lluis, Isaac Ramos-Pérez, Adriano Camps, Juan Fernando Marchán-Hernandez, Nereida Rodríguez-Álvarez, Enric Valencia, Miguel Angel Guerreo, Juan Manuel Nieto*

## TU3.203: Tuesday, July 8, 13:20 - 15:00

**TU3.203** **High Wind Speed Retrievals from SAR and Scatterometry I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 203
Co-Chairs: Will Perrie and Yijun He

13:20
**TU3.203.1** **SAR DERIVED WIND AND OCEAN WAVE FIELDS OF MESOSCALE CYCLONES**
*Susanne Lehner, Stephan Brusch, Antonio Reppucci*

13:40
**TU3.203.2** **RADARSAT SCANSAR WIND RETRIEVAL AND RAIN EFFECTS ON SCANSAR MEASUREMENTS UNDER HURRICANE CONDITIONS**
*Congling Nie, David G. Long*

14:00
**TU3.203.3** **EFFECTS OF TROPICAL CYCLONES ON KUROSHIO AND THE ADJACENT SHELF-SLOPE WATERS**
*Chau-Ron Wu, Yu-Lin Chang*

14:20
**TU3.203.4** **WIND RETRIEVAL OF TROPICAL CYCLONES USING C-BAND SYNTHETIC APERTURE RADAR**
*Jochen Horstmann, Wolfgang Koch, Donald R. Thompson, Frank M. Monaldo*

14:40
**TU3.203.5** **IMPACTS OF SATELLITE REMOTE SENSING DATA ON HURRICANE FORECASTING**
*Hui Shen, Yijun He, William Perrie*



## TU3.210: Tuesday, July 8, 13:20 - 15:00

**TU3.210** **Radiance Assimilation and Retrieval Methods I**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 13:20 - 15:00
Place: Room 210
Co-Chairs: Al Gasiewski and Joel Susskind

13:20
**TU3.210.1** **1D-VAR RETRIEVAL USING SUPERCHANNELS**
*Xu Liu, Dan Zhou, Allen Larar, Bill Smith, Peter Schluessel, Stephen Mango, Karen St. Germain*

13:40
**TU3.210.2** **RETRIEVAL OF ATMOSPHERIC INTEGRATED WATER VAPOR AND CLOUD LIQUID WATER CONTENT OVER THE OCEAN FROM SATELLITE DATA USING THE 1-D-VAR ICE CLOUD MICROPHYSICS DATA ASSIMILATION SYSTEM (IMDAS)**
*Cyrus Raza Mirza, Toshio Koike, Yang Kun, Tobias Graf*

14:00
**TU3.210.3** **VARIATIONAL PRESSURE IMAGE ASSIMILATION FOR ATMOSPHERIC MOTION ESTIMATION**
*Thomas Corpetti, Patrick Heas, Etienne Mémin, Nicolas Papadakis*

14:20
**TU3.210.4** **SOIL MOISTURE FROM METOP SCATTEROMETER DATA: ASSIMILATION RESULTS FROM A NUMERICAL WEATHER PREDICTION EXPERIMENT**
*Klaus Scipal, Matthias Drusch*

14:40
**TU3.210.5** **GAUSSIAN MODEL ADAPTIVE TIME DOMAIN FILTER (GMAT) FOR WEATHER RADARS**
*Cuong Nguyen, V. Chandrasekar, Dmitri Moisseev*

## TU4.101: Tuesday, July 8, 15:20 - 17:00

**TU4.101** **Remote Sensing for Landmine and Unexploded Ordnance Identification and Removal II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 101
Co-Chairs: Leslie Collins and Joseph Wilson

15:20
**TU4.101.1** **UXO IDENTIFICATION USING BERKELEY UXO DISCRIMINATOR (BUD)**
*Erika Gasperikova, Torquil Smith, Karl Kappler, Frank Morrison, Alex Becker*

15:40
**TU4.101.2** **MAGNETIC DISCRIMINATION OF HELICOPTER DATA FOR CHARACTERIZATION OF UXO CONTAMINATED SITES**
*Stephen Billings, David Wright, Jack Foley*

16:00
**TU4.101.3** **MODELING HIGHLY PERMEABLE AND CONDUCTIVE ELLIPSOIDAL CLUTTE FOR THE DETECTION OF UXO IN THE ELECTROMAGNETIC INDUCTION REGIME**
*Tomasz M. Grzegorczyk, Benjamin E. Barrowes, Kevin O'Neill*

16:20
**TU4.101.4** **ANALYSIS OF AN INFORMATION-BASED SENSOR MANAGER APPLICABLE TO LANDMINE DETECTION**
*Mark Kolba, Leslie Collins*

16:40
**TU4.101.5** **AUTOMATIC DETECTION AND CLASSIFICATION OF BURIED OBJECTS IN GPR IMAGES USING GENETIC ALGORITHMS AND SUPPORT VECTOR MACHINES**
*Edoardo Pasolli, Farid Melgani, Massimo Donelli, Redha Attoui, Mariette De Vos*



## TU4.102: Tuesday, July 8, 15:20 - 17:00

**TU4.102** **TerraSAR-X satellite: Status and First Application Results II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 102
Co-Chairs: Irena Hajnsek and Achim Roth

15:20
**TU4.102.1** **INITIAL ASSESSMENT OF THE APPLICABILITY OF TERRASAR-X FOR REPEATTRACK INTERFEROMETRY**
*Charles Werner, Urs Wegmüller, Andreas Wiesmann, Tazio Strozzi*

15:40
**TU4.102.2** **ANALYSIS OF ATMOSPHERIC PROPAGATION EFFECTS IN TERRASAR-X IMAGES**
*Andreas Danklmayer, Bjoern Doering, Marco Schwerdt, Madhukar Chandra*

16:00
**TU4.102.3** **HIGH RESOLUTION WIND FIELDS FROM TERRASAR-X DATA**
*Jochen Horstmann, Donald R. Thompson, Nathaniel S. Winstead, Frank M. Monaldo*

16:20
**TU4.102.4** **FIRST RESULTS ON THE USE OF TERRASAR-X DATA FOR OCEANOGRAPHIC APPLICATIONS**
*Susanne Lehner, Stephan Brusch*

16:40
**TU4.102.5** **FIRST ASSESSMENT OF SIMULATED TANDEM-X SCIENCE PRODUCTS**
*Irena Hajnsek, Thomas Busche, Alberto Moreira*

## TU4.103: Tuesday, July 8, 15:20 - 17:00

**TU4.103** **Ionospheric Effects in Polarimetric and Interferometric SAR Imagery II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 103
Co-Chairs: Tom Ainsworth and Tony Freeman

15:20
**TU4.103.1** **MAPPING THE IONOSPHERE USING L-BAND SAR DATA**
*Jeremy Nicoll, Franz Meyer*

15:40
**TU4.103.2** **QUANTIFYING AND CORRECTING IONOSPHERIC EFFECTS ON P-BAND SAR IMAGES**
*Shaun Quegan, Jim Green, Konstantinos Papathanassiou*

16:00
**TU4.103.3** **POLINSAR AT LOW FREQUENCY AND IONOSPHERIC EFFECTS**
*Pascale Dubois-Fernandez, Sebastien Angelliaume, My-Linh Truong-Loi, Anthony Freeman, Eric Pottier*

16:20
**TU4.103.4** **A STATISTICAL ANALYSIS OF THE IMPACT OF ORBITAL AND ATMOSPHERIC COMPONENTS ON THE ESTIMATION OF REGIONAL TRENDS IN MULTI-INTERFEROGRAM DATA-STACKS**
*Alessandro Ferretti, Alfio Fumagalli, Fabrizio Novali, Pietro Panzeri, Emanuele Passera*

16:40
**TU4.103.5** **IMAGE FORMATION ALGORITHM FOR TOPSIDE IONOSPHERE SOUNDING WITH SPACEBORNE HF-SAR SYSTEM**
*Jie Chen, Zhuo Li, Wei Liu, Chunsheng Li, Yinqing Zhou*



## TU4.104: Tuesday, July 8, 15:20 - 17:00

**TU4.104** **Global Soils and Soil Moisture Products**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 104
Co-Chairs: Charles Laymon and Klaus Scipal

15:20
**TU4.104.1** **GLOBAL EVALUATION OF REMOTELY SENSED SOIL MOISTURE RETRIEVALS**
*Wade Crow*

15:40
**TU4.104.2** **THE WINDSAT GLOBAL SOIL MOISTURE DATA SET**
*Li Li, Peter Gaiser*

16:00
**TU4.104.3** **IMPACT OF LAND MODEL PHYSICS ON SOIL MOISTURE ASSIMILATION**
*Rolf Reichle, Sujay Kumar, Randal Koster, Christa Peters-Lidard, Wade Crow*

16:20
**TU4.104.4** **INTEGRATION OF SATELLITE-RETRIEVED SOIL MOISTURE OBSERVATIONS WITH A GLOBAL TWO-LAYER SOIL MOISTURE MODEL**
*John Bolten, Wade Crow, Xiwu Zhan, Thomas Jackson, Curt Reynolds*

16:40
**TU4.104.5** **SOIL MOISTURE REMOTE SENSING FOR NUMERICAL WEATHER PREDICTION: L-BAND AND C-BAND EMISSION MODELING OVER LAND SURFACES, THE COMMUNITY MICROWAVE EMISSION MODEL (CMEM)**
*Patricia de Rosnay, Matthias Drusch, Jean-Pierre Wigneron, Thomas Holmes, Gianpaolo Balsamo, Aaron Boone, Jean-Christophe Calvet, Yann Kerr*

## TU4.105: Tuesday, July 8, 15:20 - 17:00

**TU4.105** **EARLINET -- The European Aerosol Research Lidar Network II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 105
Co-Chairs: Raymond M. Hoff and Arnoud Apituley

15:20
**TU4.105.1** **PHOTON-COUNTING LIDAR FOR AEROSOL DETECTION AND 3-D IMAGING**
*Richard Marino, Jonathan Richardson, Robert Garnier, David Ireland, Laura Bickmeier, Christina Siracusa, Patrick Quinn*

15:40
**TU4.105.2** **USING 532 NM HSRL AND 1064 NM ELASTIC-SCATTER LIDAR OBSERVATIONS TO VERIFY AND UPDATE CRAM DUAL-WAVELENGTH AEROSOL RETRIEVAL MODELS**
*John Reagan, Christopher McPherson, Rich Ferrare, Chris Hostetler, John Hair*

16:00
**TU4.105.3** **ANALYSIS OF SAHARAN DUST OBSERVATIONS BY CALIPSO IN THE CONTEXT OF CRAM**
*Christopher McPherson, John Reagan*

16:20
**TU4.105.4** **LIDAR NETWORK FOR MONITORING ASIAN DUST AND AIR POLLUTION AEROSOLS**
*Nobuo Sugimoto, Ichiro Matsui, Atsushi Shimizu, Tomoaki Nishizawa*



## TU4.107: Tuesday, July 8, 15:20 - 17:00

**TU4.107** **Multi- and Hyperspectral Image Processing I**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 107
Co-Chairs: Jon Benediktsson and Dimitris Manolakis

15:20
**TU4.107.1** **SPARSE REPRESENTATIONS FOR HYPERSPECTRAL DATA CLASSIFICATION**
*Salman Siddiqui, Stefan Robila, Jing Peng, Dajin Wang*

15:40
**TU4.107.2** **COMPARISON AMONG SPECTRA SIMILARITIES MEASURES BASED ON ENTROPY, EUCLIDIAN DISTANCE AND CORRELATION COEFFICIENT IN HYPERSPECTRAL DATA**
*Marco Antonio Pizarro, David Fernandes*

16:00
**TU4.107.3** **ON THE SPECTRAL CORRELATION STRUCTURE OF HYPERSPECTRAL IMAGING DATA**
*Dimitris Manolakis, Ronald Lockwood, Thomas Cooley*

16:20
**TU4.107.4** **HYPERSPECTRAL DATA SEGMENTATION AND CLASSIFICATION IN PRECISION AGRICULTURE: A MULTI-SCALE ANALYSIS**
*Yannick Lanthier, Abdou Bannari, Driss Haboudane, John R. Miller, Nicolas Tremblay*

16:40
**TU4.107.5** **PARALLEL IMPLEMENTATION OF TARGET AND ANOMALY DETECTION ALGORITHMS FOR HYPERSPECTRAL IMAGERY**
*Abel Paz, Antonio Plaza, Soraya Blazquez*

## TU4.108: Tuesday, July 8, 15:20 - 17:00

**TU4.108** **Multichannel - Multidimensional Coherent SAR Data Combination Techniques I**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 108
Co-Chairs: Fabrizio Lombardini and Alessandro Ferretti

15:20
**TU4.108.1** **ANALYSIS OF COHERENCE MATRIX FOR THE CHARACTERISATION OF DECORRELATING TARGETS**
*Alessandro Ferretti, Alfio Fumagalli, Fabrizio Novali, Claudio Prati, Fabio Rocca, Alessio Rucci*

15:40
**TU4.108.2** **SAR TOMOGRAPHY OVER DECORRELATING TARGETS: A MODEL BASED APPROACH**
*Andrea Monti Guarnieri, Fabio Rocca, Stefano Tebaldini*

16:00
**TU4.108.3** **ESTIMATION OF GROUND TOPOGRAPHY IN FORTESTED TERRAIN BY MEANS OF POLARIMETRIC SAR INTERFEROMETRY**
*Florian Kugler, Carlos Lopez-Martinez, Konstantinos Papathanassiou, Seung-Kuk Lee*

16:20
**TU4.108.4** **MULTIBASELINE COHERENCE OPTIMISATION IN PARTIAL POLARIMETRIC MODES**
*Andreas Reigber, Maxim Neumann, Laurent Ferro-Famil, Marc Jäger, Pau Prats*

16:40
**TU4.108.5** **A PUBLIC DATABASE OF SIMULATED MULTIDIMENSIONAL SAR DATA FOR TECHNIQUES VALIDATION**
*Gerard Margarit, Jordi J. Mallorqui, Carlos Lopez-Martinez*



## TU4.109: Tuesday, July 8, 15:20 - 17:00

**TU4.109** **Rare Target Detection in Hyperspectral Imagery II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 109
Co-Chairs: Alan Schaum and James Theiler

15:20
**TU4.109.1** **HYPERSPECTRAL CHANGE DETECTION: METHODOLOGIES AND CHALLENGES**
*Michael Eismann, Joseph Meola*

15:40
**TU4.109.2** **GENERALIZED CHROMODYNAMIC DETECTION**
*Alan Stocker, Pierre Villeneuve*

16:00
**TU4.109.3** **EFFECTS OF ENDMEMBER DIMENSIONALITY ON SUBPIXEL DETECTION PERFORMANCE**
*Joshua Broadwater*

16:20
**TU4.109.4** **SPECTRAL IMAGE UTILITY SENSITIVITY TO IMAGE PREPROCESSING AND INFORMATION EXPLOITATION PARAMETERS**
*Marcus Stefanou, John Kerekes*

16:40
**TU4.109.5** **DETECTION OF HUMAN SKIN IN NEAR INFRARED HYPERSPECTRAL IMAGERY**
*Abel Nunez, Michael Mendenhall*

## TU4.110: Tuesday, July 8, 15:20 - 17:00

**TU4.110** **Forests and Vegetation: SAR Interferometry and Polarimetry II**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 110
Co-Chairs: Paul Siqueira and Robert Treuhaft

15:20
**TU4.110.1** **EXTRACTION OF FOREST BIOPHYSICAL PARAMETERS USING POLARIMETRIC SAR**
*Michael Wollersheim, Michael Collins*

15:40
**TU4.110.2** **ANALYSIS AND CORRECTION OF SPECKLE NOISE EFFECTS ON POLINSAR DATA BASED ON COHERENT MODELING**
*Carlos Lopez-Martinez, Konstantinos Papathanassiou, Luca Pipia*

16:00
**TU4.110.3** **ROBUST VEGETATION HEIGHT EXTRACTION USING MAXIMUM LIKELIHOOD ESTIMATION FOR DUAL-BASEDLINE POLINSAR**
*Shunjun Wei, Xiaoling Zhang, Di Han*

16:20
**TU4.110.4** **FOREST SPATIAL STRUCTURE ENHANCING NON-GAUSSIAN TEXTURE IN AIRBORNE L-BAND POLSAR IMAGES**
*Seisuke Fukuda*

16:40
**TU4.110.5** **TOWARDS COMPLEX-VALUED NEURAL ALGORITHMS FOR FOREST PARAMETERS ESTIMATION FROM POLINSAR DATA**
*Emanuele Angiuli, Fabio Del Frate, Chiara Solimini, Domenico Solimini*



## TU4.111: Tuesday, July 8, 15:20 - 17:00

**TU4.111** **Microwave Radiometer Technology II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 111
Co-Chairs: Steven Reising and Adriano Camps

15:20
**TU4.111.1** **INTERNAL COLD LOADS FOR RADIOMETER CALIBRATION**
*Niels Skou, Sten S. Soebjaerg, Jan Balling*

15:40
**TU4.111.2** **CALIBRATION OF AN L-BAND SOIL MOISTURE RADIOMETER USING SYSTEM IDENTIFICATION TECHNIQUES**
*Miao Tian, Albin Gasiewski*

16:00
**TU4.111.3** **W-BAND 2-D SCANNING FULLY-POLARIMETRIC RADIOMETER SYSTEM FOR REMOTE SENSING APPLICATIONS**
*Sung-Hyun Kim, Jin-Taek Seong, Hyuk Park, Ho-Jin Lee, Obolonsky Valeriy, Denisov Alexander, Yong-Hoon Kim*

16:20
**TU4.111.4** **BRIGHTNESS TEMPERATURE RETRIEVALS FROM THE SMALL AIRBORNE MIRAS**
*Ignasi Corbella, Francesc Torres, Nuria Duffo, Adriano Camps, Mercè Vall-llossera*

16:40
**TU4.111.5** **ELBARAII, L-BAND RADIOMETER SYSTEM**
*Andreas Wiesmann, Charles Werner, Mike Schwank, Christian Mätzler, Beat Elsasser, Urs Wegmüller*

## TU4.203: Tuesday, July 8, 15:20 - 17:00

**TU4.203** **High Wind Speed Retrievals from SAR and Scatterometry II**
Session Type: Oral-Invited
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 203
Co-Chairs: Will Perrie and Yijun He

15:20
**TU4.203.1** **WIND SPEED RETRIEVALS FROM MULTI-SENSOR SATELLITE DATA FROM HURRICANES AND TROPICAL CYCLONES**
*Yijun He, Biao Zhang, Hui Shen, William Perrie*

15:40
**TU4.203.2** **HIGH-VELOCITY WIND MEASUREMENTS USING SYNTHETIC APERTURE RADAR**
*William Pichel, Xiaofeng Li, Frank M. Monaldo, Todd Sikora, Christopher Jackson*

16:00
**TU4.203.3** **RAIN AND WIND ESTIMATION FROM SEAWINDS IN HURRICANES AT ULTRA HIGH RESOLUTION**
*Brent Williams, David G. Long*

16:20
**TU4.203.4** **SCATTEROMETER-DERIVED WIND FIELDS FOR MID-LATITUDE STORMS**
*Mark Bourassa*

16:40
**TU4.203.5** **WIND POWER DENSITY OVER GLOBAL OCEAN**
*W. Timothy Liu, Wenqing Tang, Xiaosu Xie*

Tuesday

## TU4.210: Tuesday, July 8, 15:20 - 17:00

**TU4.210** **Memorial Session for Professor Jin Au Kong**
Session Type: Oral-Contributed
Time: Tuesday, July 8, 15:20 - 17:00
Place: Room 210
Co-Chairs: Leung Tsang and Joel T. Johnson
About: This session is dedicated to the memory of Professor Jin Au Kong for his extensive contributions to the fields of electromagnetic wave propagation, radiation, scattering and their application to microwave remote sensing. Following the presentations listed below, remarks on Professor Kong's accomplishments will be made by his former colleagues and students. A reception for session participants and attendees will follow at 18:00.

15:20
**TU4.210.1** **PROFESSOR KONG'S RESEARCH IN REMOTE SENSING AND HIS INSPIRATIONAL SUPERVISION**
*Leung Tsang, Simon Yueh, Joel Johnson, Maurice Borgeaud*

15:40
**TU4.210.2** **J. A. KONG AND HIS INFLUENCE ON REMOTE SENSING DEVELOPMENT IN EAST ASIA**
*Ya-Qiu Jin, Du Yang, Kun-Shan Chen*

16:00
**TU4.210.3** **J A KONG: HIS OUTSTANDING SCIENTIFIC CONTRIBUTION TO THEORY OF MICROWAVE REMOTE SENSING, HIS TIRELESS ACTIVITY IN ORGANIZING SCIENTIFIC EVENTS**
*Paolo Pampaloni*

16:20
**TU4.210.4** **CONTRIBUTIONS OF PROFESSOR KONG AND HIS MIT GROUP TO ADVANCING RADAR AND SAR POLARIMETRY**
*Jakob van Zyl*

16:40
**TU4.210.5** **J. A. KONG AND THE DEVELOPMENT OF THE REMOTE SENSING OF VEGETATION/ FORESTRY IN THE EARLY 1990 POLARIMETRIC ASPECTS OF J. A. KONG'S REMOTE SENSING RESEARCH**
*Thuy Le Toan, Jean-Claude Souyris*

## TUP.A: Tuesday, July 8, 17:00 - 18:30

**TUP.A** **Passive Microwave Sensing of Soil Moisture**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area A
Co-Chairs: John Galantowitz and Dongryeol Ryu

**TUP.A.1** **A WEB MAPPING SERVICE FOR LAND SURFACE PARAMETERS FROM PASSIVE MICROWAVE OBSERVATIONS**
*Richard De Jeu, John Van De Vegte, Thomas Holmes, Manfred Owe, Nils De Reus*

**TUP.A.2** **STUDY OF ATMOSPHERIC EFFECTS ON SOIL MOISTURE RETRIEVED BY AMSR-E BRIGHTNESS TEMPERATURE OVER TIBETAN PLATEAU**
*Yongqian Wang, Jiancheng Shi, Lingmei Jiang, Bangsen Tian*

**TUP.A.3** **SOIL MOISTURE RETRIEVAL FROM PASSIVE MICROWAVE DATA: A SENSITIVITY STUDY USING A COUPLED SVAT-RADIATIVE TRANSFER MODEL AT THE UPPER DANUBE ANCHOR SITE**
*Florian Schlenz, Alexander Loew, Wolfram Mauser*

**TUP.A.4** **EFFECTS OF OPTIMAL DECONVOLUTION ON SOIL MOISTURE RETRIEVAL ACCURACY**
*Ashutosh Limaye, William Crosson, Charles Laymon*

**TUP.A.5** **A SIMULATION STUDY TO QUANTIFY THE RELIEF EFFECTS ON THE OBSERVATIONS PERFORMED BY AMSR-E AND SMAP MICROWAVE RADIOMETERS**
*Nazzareno Pierdicca, Luca Pulvirenti, Frank Marzano*

**TUP.A.6** **ADAPTING SOIL MOISTURE RETRIEVAL ALGORITHM FOR DATA ASSIMILATION INTO WEATHER FORECASTING MODELS**
*Francesco Posa, Claudia Notarnicola*

**TUP.A.7** **EXPLICIT INVERSE OF SOIL MOISTURE RETRIEVAL WITH ARTIFICIAL NEURAL NETWORK USING PASSIVE MICROWAVE REMOTE SENSING DATA: SUITABILITY FOR FUTURE USE**
*Soo-See Chai, Bert Veenendaal, Geoff West, Jeffrey Walker, Graciela Metternicht*

**TUP.A.8** **INPUT PATTERN ACCORDING TO STANDARD DEVIATION OF BACKPROPAGATION NEURAL NETWORK: INFLUENCE ON THE ACCURACY FOR SOIL MOISTURE RETRIEVAL**
*Soo-See Chai, Bert Veenendaal, Geoff West, Jeffrey Walker, Graciela Metternicht*

**TUP.A.9** **VALIDATING AMSR-E LEVEL-3 LAND SURFACE SOIL MOISTURE PRODUCT WITH CEOP-3/4 DATA IN CHINA AND MONGOLIA**
*Zhen Li, Lei Wang, Xinwu Li, Quan Chen, Wei Wu*

**TUP.A.10** **DISTRIBUTED HYDROLOGICAL MODEL WITH NEW SOIL WATER PARAMETERIZATION FOR INTEGRATING REMOTELY SENSED SOIL MOISTURE AT WATERSHED SCALE**
*Jiongfeng Chen, Wan-Chang Zhang*

## TUP.B: Tuesday, July 8, 17:00 - 18:30

**TUP.B** **Soil Moisture Experimental Observations**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area B
Co-Chairs: Li Li and Jennifer Grant

**TUP.B.1** **L-BAND EMISSION FROM BARE SOIL: DIURNAL EFFECTS**
*Cihan Erbas, Brian Hornbuckle*

**TUP.B.2** **HILLSLOPE-SCALE CONTROLS ON REMOTE SENSING OF SOIL MOISTURE WITH MICROWAVE RADIOMETRY**
*Alejandro Flores, Valeriy Ivanov, Dara Entekhabi, Rafael Bras*

**TUP.B.3** **AN AIRBORNE REMOTE SENSING EXPERIMENT FOR CATCHMENT-SCALE WATER CYCLE STUDY IN A TYPICAL INLAND RIVER BASIN OF CHINA**
*Xin Li, Jian Wang, Mingguo Ma, Qiang Liu, Zeyong Hu, Qinhuo Liu, Tao Che, Peixi Su, Rui Jin, Weizhen Wang*

**TUP.B.4** **REMOTE SENSING OF CANOPY WATER CONTENT DURING SMEX'04 AND SMEX'05 USING SHORTWAVE-INFRARED REFLECTANCES**
*E. Raymond Hunt Jr., M. Tugrul Yilmaz, Thomas Jackson*

**TUP.B.5** **L-BAND RADIOMETRIC OBSERVATIONS OF SUN-GLINT OVER LAND SURFACES**
*Alessandra Monerris Belda, Adriano Camps, Mercè Vall-llossera, Enric Santanach, Pablo Benedicto*

**TUP.B.6** **ROCK FRACTION EFFECTS ON THE SURFACE SOIL MOISTURE ESTIMATES FROM L-BAND RADIOMETRIC MEASUREMENTS**
*Alessandra Monerris Belda, Mercè Vall-llossera, Adriano Camps, María Piles*

**TUP.B.7** **HIGH RESOLUTION AIRBORNE SOIL MOISTURE MAPPING**
*Jeffrey Walker, Rocco Panciera, Edward Kim*

**TUP.B.8** **EFFECT OF PROPAGATION PATH CHARACTERISTICS ON LOW-FREQUENCY ON CLOUD-TO-GROUND LIGHTNING SIGNAL PARAMETERS.**
*Prakash Ramani, Kenneth Cummins, Nathan Goodman*

## TUP.C: Tuesday, July 8, 17:00 - 18:30

**TUP.C** **Surface Roughness and Soil Properties I**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area C
Co-Chairs: William Crosson and John Bolten

**TUP.C.1** **TEMPERATURE DEPENDABLE MICROWAVE DIELECTRIC MODEL FOR MOIST SOILS**
*Valery Mironov, Sergej Fomin*

**TUP.C.2** **ERROR ANALYSIS OF SOIL ROUGHNESS PARAMETERS ESTIMATED FROM MEASURED SURFACE PROFILE DATA**
*Masahiko Nishimoto*

**TUP.C.3** **APPLICATION OF TIR IMAGERY AND SPECTROSCOPY FOR THE EXTRACTION OF SOIL TEXTURAL INFORMATION AT FOWLERS GAP, WESTERN NEW SOUTH WALES, AUSTRALIA.**
*Rob Hewson, Geoff Taylor, Lew Whitbourn*

**TUP.C.4** **SURFACE ROUGHNESS CLASSIFICATION WITH MULTIPOLARIZED C-BAND SAR DATA AS A PRIORI INFORMATION FOR SOIL MOISTURE RETRIEVAL**
*Mélanie Trudel, François Charbonneau, Robert Leconte*

**TUP.C.5** **A NOVEL METHOD FOR 2-D AGRICULTURAL SOIL ROUGHNESS CHARACTERIZATION BASED ON A LASER SCANNING TECHNIQUE**
*Francisco Grings, Matias Barber, Carolina Pepe, Pablo Perna, Julio Cesar Alberto Jacobo-Berlles, Marc Thibeault, Haydee Karszenbaum*

**TUP.C.6** **POTENTIAL OF C-BAND MULTIPOLARIZED AND POLARIMETRIC SAR FOR SOIL DRAINAGE CLASSIFICATION AND MAPPING**
*Mohamed Abou Niang, Michel C. Nolin, Monique Bernier, Isabelle Perron*

**TUP.C.7** **SAR REMOTE SENSING DATA FOR SUBSURFACE TARGETS DETECTION AND LOP NUR LAKE EVOLUTION AND EXTINCTION STUDY**
*Yun Shao, Huazhe Gong, Qing Dong*

**TUP.C.8** **A DECISION TREE ALGORITHM FOR FREEZE/THAW CLASSIFICATION OF SURFACE SOIL USING SSM/I**
*Rui Jin, Xin Li*

**TUP.C.9** **COMPARISON OF MODIS EMISSIVITY OBSERVATION WITH GROUND MEASUREMENTS**
*Maria Mira, Thomas Schmugge, Vicente Caselles, Enric Valor*

**TUP.C.10** **THE AMSR-E INSTANTANEOUS EMISSIVITY ESTIMATION AND ITS CORRELATION, FREQUENCY DEPENDENCY ANALYSIS OVER DIFFERENT LAND COVER**
*Yubao Qiu, Jiancheng Shi, Martti Hallikainen, Juha Lemmetyinen, Jouni Pulliainen, Jarkko Koskinen, Anna Kontu*

## TUP.D: Tuesday, July 8, 17:00 - 18:30

**TUP.D** **Surface Roughness and Soil Properties II**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area D
Co-Chairs: Marouane Temimi and Patricia de Rosnay

**TUP.D.1** **CALIBRATION OF IEM MODEL FOR THE SOIL MOISTURE MAPPING OF NON-INUNDATED PADDY FIELDS USING ALOS/PALSAR DATA**
*Junichi Susaki*

**TUP.D.2** **PRELIMINARY POLARIMETRIC MEASUREMENTS OF BARE AND VEGETATED SOILS RADAR BACKSCATTERING COEFFICIENTS AND BRIGHTNESS TEMPERATURES ANGULAR DEPENDENCES AT 15GHZ**
*Artashes Arakelyan, Arsen Arakelyan, Melanya Grigoryan, Izabela Hakobyan, Astghik Hambaryan, Vanik Karyan, Mushegh Manukyan, Gagik Hovhannisyan*

**TUP.D.3** **BISTATIC SAR AND GNSS REFLECTOMETRY FOR LAND GEOPHYSICAL PARAMETER RETRIEVAL**
*Nazzareno Pierdicca, Leila Guerriero, Luca Pulvirenti, Francesca Ticconi*

**TUP.D.4** **ERROR ESTIMATION OF SOIL MOISTURE DERIVED FROM ACTIVE AND PASSIVE MICROWAVE SATELLITE OBSERVATIONS AND MODEL DATA**
*Klaus Scipal, Thomas Holmes, Richard De Jeu, Vahid Naeimi, Wolfgang Wagner*

**TUP.D.5** **RETRIEVAL OF SUBSURFACE SOIL MOISTURE USING SAR OBSERVATION AT UHF/VHF BANDS**
*Ya-Qiu Jin, Renyuan Qi*

**TUP.D.6** **INCORPORATING REMOTE SENSING DATA IN A SIMPLE DISTRIBUTED HYDROLOGICAL MODEL FOR RUNOFF AND SPATIAL SOIL MOISTURE SIMULATION**
*Xianghu Li, Liliang Ren, Guizuo Wang*

**TUP.D.7** **SOIL MOISTURE CONTENT RETRIEVAL IN AN ARID TO SEMI-ARID REGION IN THE XINJIANG PROVINCE**
*Qin Li, Xi Chen, Frank Veroustraete, Anming Bao*

**TUP.D.8** **ACTIVE AND PASSIVE MICROWAVE SENSORS AS A NEW TOOL TO INVESTIGATE TIME SERIES OF SOIL MOISTURE INDICES OVER WINTER**
*Sonia Heitz, Patrick Matgen, Guy Schumann, Laurent Pfister*

**TUP.D.9** **AN AUTOMATED MULTI-SATELLITE APPROACH FOR SOIL MOISTURE MAPPING USING VISIBLE/INFRARED, PASSIVE MICROWAVE DATA AND TOPOGRAPHIC ATTRIBUTES**
*Marouane Temimi, Robert Leconte, Reza Khanbilvardi*

## TUP.E: Tuesday, July 8, 17:00 - 18:30

**TUP.E** **Vegetation Biophysical Parameter Estimation III**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area E
Co-Chairs: Alan Strahler and Yoshio Inoue

**TUP.E.1** **RETRIEVAL OF THE OVERSTORY AND UNDERSTORY LEAF AREA INDEX OF FOREST STANDS USING A MODEL OF FOREST CANOPY REFLECTANCE**
*Jianxi Huang, Feng Mao, Weijun Sun, Wenbo Xu, Wensheng Zhou*

**TUP.E.2** **ESTIMATING WHEAT EQUIVALENT WATER THICKNESS USING LANDSAT TM/ETM+ DATA**
*Abduwasit Ghulam, Tim Kusky, Qiming Qin, Zhao-Liang Li, Alim Kasim*

**TUP.E.3** **ESTIMATING BIOPHYSICAL AND BIOCHEMICAL PARAMETERS AND YIELD OF WINTER WHEAT BASED ON LANDSAT TM IMAGES**
*Yansong Bao, Liangyun Liu, Jihua Wang*

**TUP.E.4** **FOLIAR BIO-PHYSICAL AND SPECTRAL PROPERTIES ASSOCIATED WITH LIGHT ENVIRONMENT IN A MATURE POPLAR STAND**
*Petya Campbell, Elizabeth Middleton, Lawrence Corp, Geoffrey Parker, Yen-Ben Cheng, Debojit Nayak, Qing Yuan*

**TUP.E.5** **TOWARD A GLOBAL TUAMOTU ARCHIPELAGO COCONUT TREES SENSING USING HIGH RESOLUTION OPTICAL DATA**
*Raimana Teina, Dominique Bérériat, Benoît Stoll, Sébastien Chabrier*

**TUP.E.6** **IMPROVING LAND SURFACE PIXEL LEVEL ALBEDO CHARACTERIZATION USING SUB-PIXEL INFORMATION RETRIEVED FROM REMOTE SENSING**
*Wenjun Liu, Baoxin Hu, Shusen Wang*

**TUP.E.7** **VALIDATION OF IMPROVED FOREST CANOPY MEASUREMENTS FROM A GROUND-BASED LIDAR INSTRUMENT (ECHIDNA™)**
*Xiaoyuan Yang, Tian Yao, Alan Strahler, Curtis E. Woodcock, Crystal Schaaf, Ranga Myneni, Jicheng Liu, Glenn J. Newnham, David L. B. Jupp, Darius S. Culvenor, Jenny L. Lovell, Wenge Ni-Meister, Shihyan Lee, Xiaowen Li, Feng Zhao, Qingling Zhang, Mitchell Schull, Miguel O. Román III, Zhuosen Wang, Yanmin Shuai*

**TUP.E.8** **NET PRIMARY PRODUCTIVITY AND BIOMASS ESTIMATION IN INNER MONGOLIA (CHINA) BASED ON SPOT NDVI AND A LIGHT USE EFFICIENCY MODEL**
*Huiling Long, Xiaobing Li, Hong Wang, Dandan Wang, Lingmei Huang*

## TUP.F: Tuesday, July 8, 17:00 - 18:30

**TUP.F** **Radar and Soil Moisture**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area F
Co-Chairs: Yisok Oh and Mehrez Zribi

**TUP.F.1** **KU-BAND SENSITIVITY TO SOIL MOISTURE. AN EVALUATION STUDY FOR MONITORING TEMPORAL SOIL MOISTURE CHANGE DETECTION OVER THE NAFE06 STUDY AREA.**
*Iliana Mladenova, Venkat Lakshmi, Thomas Jackson, Jeffrey Walker*

**TUP.F.2** **SOIL MOISTURE CHANGE RETRIEVAL USING S-BAND RADAR DATA DURING SGP99 AND SMEX02**
*Quan Chen, Zhen Li, Lei Wang*

**TUP.F.3** **A NEW METHOD TO RETRIEVE SOIL MOISTURE AT BARE SOIL SURFACE USING ERS SCATTEROMETER DATA**
*Ruijing Sun, Jiancheng Shi, Lingmei Jiang, Jinyang Du*

**TUP.F.4** **CHARACTERIZATION OF BACKSCATTER BY SURFACE FEATURES IN L-BAND ACTIVE MICROWAVE REMOTE SENSING OF SOIL MOISTURE**
*Narendra Das, Binayak Mohanty, Eni Njoku*

**TUP.F.5** **VALIDATION OF SPACE-BORNE SAR DATA FOR PERIODIC OBSERVATION AND INVERSION OF SURFACE SOIL MOISTURE IN SARDINIA**
*Monique Bernier, Imen Gherboudj, Rebecca Filion, Claudio Paniconi, Massimo Melis, Antonino Soddu, Ralf Ludwig*

**TUP.F.6** **ANALYSIS OF VALID RANGES IN SOIL INVERSION MODELS BASED ON THE CLOUDE-POTTIER DECOMPOSITION**
*Qiang Yin, Fang Cao, Wen Hong*

**TUP.F.7** **ESTIMATION OF SOIL MOISTURE IN HEIHE RIVER BASIN OASIS USING ASAR DATA**
*Shuguo Wang, Xin Li, Rui Jin*

**TUP.F.8** **APPLICATION OF MICROWAVE DATA FOR AGRICULTURAL AREA**
*Katarzyna Dabrowska-Zielinska, Maria Gruszczynska, Wanda Kowalik, Yoshio Ynoue*

**TUP.F.9** **CAPABILITIES AND LIMITATIONS OF SATELLITE ACTIVE MICROWAVE DATA IN SOIL MOISTURE AND DROUGHT MONITORING IN THE MIDDLE EASTERN ENVIRONMENT.**
*Hosni Ghedira*

**TUP.F.10** **SOIL MOISTURE MAPPING IN TYPICAL SEMI-ARID REGIONS OF CHINA BY USING ENVISAT ASAR DATA**
*Jiongfeng Chen, Wan-Chang Zhang*

**TUP.F.11** **SPATIAL VARIABILITY OF SURFACE SOIL MOISTURE IN SEMI-ARID REGION OF NORTHERN CHINA**
*Jiongfeng Chen, Wan-Chang Zhang*

## TUP.G: Tuesday, July 8, 17:00 - 18:30

**TUP.G** **Radiance Assimilation and Retrieval Methods II**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area G
Co-Chairs: Albin Gasiewski and Rafal Wojcik

**TUP.G.1** **DEVELOPMENT OF A LAND-SURFACE HYDROLOGICAL MODEL TOPX AND ITS COUPLING STUDY WITH REGIONAL CLIMATE MODEL RIEMS**
*Bin Yong, Wan-Chang Zhang*

**TUP.G.2** **THE PREDICTION AND PROBABILITY ESTIMATION OF TEMPERATURES AND SNOWFALL OVER THE PLATEAU BY CONSIDERING ANTHROPOGENIC IMPACT**
*Wen Wang, Xiaojun Cai, Dongliang Li*

**TUP.G.3** **A MODEL-BASED DIAGNOSTIC STUDY OF "99.6" MEIYU FRONT RAINSTORM**
*Wen Wang, Xiaojun Cai, Xiao Long*

**TUP.G.4** **VERTICAL PROMOTION OF CLOUDS CONTAMINATION BY BRIGHTNESS TEMPERATURE (A MICROWAVE REMOTE SENSING APPROACH)**
*Sam Nwaneri, Ugorji Faithful O. D.*



## TUP.H: Tuesday, July 8, 17:00 - 18:30

**TUP.H** **Applications in Data and Image Processing**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area H
Co-Chairs: Gregoire Mercier and Jocelyn Chanussot

**TUP.H.1** **AN ADAPTIVE METHOD FOR THE CONSTRUCTION OF DIGITAL TERRAIN MODEL FROM LIDAR DATA**
*Xiaohui Yuan, Liangmei Hu, Bill P. Buckles, Laura Steinberg, Vaibhav Sarma*

**TUP.H.2** **LIDAR IMAGE DATA AUTHENTICATION USING PSEUDORANDOM POLYGONS**
*Y. M. Y. Hasan, Ahmed F. Elaksher, Samir M. Al Shariff*

**TUP.H.3** **FOURIER ARRAY PROCESSING FOR BURIED VICTIMS DETECTION USING ULTRA WIDE BAND RADAR WITH UNCALIBRATED SENSORS**
*Ludvik Lidicky*

**TUP.H.4** **AUTOMATIC DETECTION OF OCEANIC EDDIES IN SEAWIFS-DERIVED COLOR IMAGES USING NEURAL NETWORKS AND SHAPE ANALYSIS**
*Samarth Patel, Ramprasad Balasubramanian, Avijit Gangopadhyay*

**TUP.H.5** **SEISMIC FAULT DETECTION BASED ON A LINEAR SUPPORT**
*Barna Keresztes, Olivier Lavialle, Monica Borda*

**TUP.H.6** **SELF ORGANIZING MAP: APPLICATION IN MORPHOMETRIC FEATURE IDENTIFICATION IN HUMID AND HYPER ARID ENVIRONMENTS**
*Amir Houshang Ehsani, Friedrich Quiel*

**TUP.H.7** **TEMPORAL AND SPATIAL CHARACTERISTICS OF BEIJING URBAN HEAT ISLAND BASED ON MODIS IMAGE DATA**
*Shanshan Li, Huili Gong, Wenji Zhao, Zhiwei Ye, Lin Zhu*

**TUP.H.8** **IMPACT OF CORRELATORS AND RECEIVERS FAILURES ON THE MIRAS INSTRUMENT ONBOARD SMOS**
*Eric Anterrieu, Ali Khazaal, Hervé Carfantan*

**TUP.H.9** **ASSIMILATION OF SST SATELLITE IMAGES FOR ESTIMATION OF OCEAN CIRCULATION VELOCITY**
*Etienne Huot, Isabelle Herlin, Gennady Korotaev*

**TUP.H.10** **ESTIMATING BIOPHYSICAL PARAMETERS FROM REMOTELY SENSED IMAGERY WITH GAUSSIAN PROCESSES**
*Luca Pasolli, Farid Melgani, Enrico Blanzieri*

**TUP.H.11** **SUPEROVERLAY DEPLOYMENT IN GRID-ENABLED IMAGE PROCESSING**
*Guido Lemoine, Dominik Brunner, Francois-Xavier Thoorens*

## TUP.I: Tuesday, July 8, 17:00 - 18:30

**TUP.I** **Image Analysis and Classification I**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area I
Co-Chairs: Jordi Inglada and Gustavo Camps-Valls

**TUP.I.1** **RESEARCH ON URBAN SPATIAL INFORMATION EXTRACTION AND LAND USE ANALYSIS**
*Wen Liu, Qiuhai Zhong, Jiancheng Luo, Zhanfeng Shen*

**TUP.I.2** **A NEW ADAPTIVE FUZZY CLUSTERING ALGORITHM FOR REMOTELY SENSED IMAGES**
*Chih-Cheng Hung, Wenping Liu, Bor-Chen Kuo*

**TUP.I.3** **INTEGRATED LANDSCAPE PATTERN AND CLASSIFICATION TREE FOR LAND USE CLASSIFICATION IN INLAND RIVER BASIN OF CHINA ARID REGION**
*Yuan Qi, Jianhua Wang, Zhen Xu, Changwei Lin*

**TUP.I.4** **CLASSIFICATION OF LIDAR DATA USING STANDARD DEVIATION OF ELEVATION AND CHARACTERISTIC POINT FEATURES**
*Krista Amolins, Yun Zhang, Peter Dare*

**TUP.I.5** **FUZZY SUPER-RESOLUTION MAPPING BASED ON MARKOV RANDOM FIELD**
*Valentyn Tolpekin, Nicholas Hamm*

**TUP.I.6** **REDUCING NEED FOR COLLOCATED GROUND AND SATELLITE BASED OBSERVATIONS IN STATISTICAL AEROSOL OPTICAL DEPTH ESTIMATION**
*Debasish Das, Vladan Radosavljevic, Slobodan Vucetic, Zoran Obradovic*

**TUP.I.7** **A FUZZY HOMOGENEITY TEST FOR THE ITERATIVE GUIDED SPECTRAL CLASS REJECTION ALGORITHM**
*Rhonda Phillips, Layne Watson, Randolph Wynne*



## TUP.J: Tuesday, July 8, 17:00 - 18:30

**TUP.J** **Image Analysis and Classification II**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area J
Co-Chairs: José Chilo and Mathieu Fauvel

**TUP.J.1** **STUDY ON CLASSIFICATION OF REMOTELY SENSED IMAGE BASED ON SYNTHETICALLY UNDERSTANDING MODEL**
*Siyuan Wang, Daliang Gong, Lun Cai, Tengbo Ma, Xingyu Fu*

**TUP.J.2** **COMPARISON OF CORRELATION FILTERS FOR VEHICLES DETECTION IN HIGH RESOLUTION AIRBORNE IMAGERY**
*Daniel A. Lavigne, Walid Ben Tara, Henri H. Arsenault*

**TUP.J.3** **MAN-MADE OBJECTS ROBUST SEGMENTATION FROM 3D SURFACE DATA USING PSEUDO-COLOR IMAGES**
*Ki In Bang, Ayman Habib*

**TUP.J.4** **NON-PARAMETER CORRELATION ANALYSIS IN POLARIMETRIC SIGNATURE AND ITS APPLICATION TO CHANGE DETECTION IN POLARIMETRIC SAR**
*Bangsen Tian, Zhen Li, Yongqian Wang*

**TUP.J.5** **DISCRIMINATION OF NUCLEAR EXPLOSIONS SITES BY SEISMIC SIGNALS USING INTRINSIC MODE FUNCTIONS AND MULTI-MODAL DATA SPACE**
*Jose Chilo, Jason M. Kinser, Thomas Lindblad*

**TUP.J.6** **SYNCHRONOUS AND HIERARCHICAL SEISMIC PATTERN DETECTION USING SIMULATED ANNEALING**
*Kou-Yuan Huang, Ying-Liang Chou*

**TUP.J.7** **A NEW METHOD OF OBTAINING SURFACE RUNOFF PARAMETERS OF SIMTOP FROM DEM**
*Jingwen Xu, Wan-Chang Zhang*

## TUP.K: Tuesday, July 8, 17:00 - 18:30

**TUP.K** **Target Detection and Pattern Recognition**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area K
Co-Chairs: Lori Mann Bruce and Bjorn Waske

**TUP.K.1** **AUTOMATIC POINT TARGET DETECTION FOR INTERACTIVE VISUAL ANALYSIS OF SAR IMAGES**
*Martin Lambers, Andreas Kolb*

**TUP.K.2** **SAR TARGET RECOGNITION BASED ON MRF AND GABOR WAVELET FEATURE EXTRACTION**
*Ruohong Huan, Ruliang Yang*

**TUP.K.3** **SUPER-RESOLUTION OF POLARIMETRIC SAR IMAGES BASED ON TARGET DECOMPOSITION AND POLARIMETRIC SPATIAL CORRELATION**
*Bin Zou, Huijun Hao, Xingjie Guo*

**TUP.K.4** **DEVELOPMENT OF A WEB-BASED APPLICATION TO EVALUATE TARGET FINDING ALGORITHMS**
*David Snyder, John Kerekes, Ian Fairweather, Robert Crabtree, Jeremy Shive, Stacey Hager*



## TUP.L: Tuesday, July 8, 17:00 - 18:30

**TUP.L** **Feature Extraction and Reduction**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area L
Co-Chairs: Lori Bruce and Bor-Chen Kuo

**TUP.L.1** **REDUCING THE COMPUTATIONAL LOAD OF HYPERSPECTRAL BAND SELECTION USING THE ONE-BIT TRANSFORM OF HYPERSPECTRAL BANDS**
*Begüm Demir, Sarp Ertürk*

**TUP.L.2** **ANT COLONY OPTIMIZATION ALGORITHM FOR FEATURE SELECTION AND CLASSIFICATION OF MULTISPECTRAL REMOTE SENSING IMAGE**
*Lintao Wen, Qian Yin, Ping Guo*

**TUP.L.3** **EXTENDED SUBSPACE METHOD FOR REMOTE SENSING IMAGE CLASSIFICATION**
*Hasi Bagan, Wataru Takeuchi, Buhe Aosier, Masami Kaneko, Xiaohui Wang, Yoshifumi Yasuoka*

**TUP.L.4** **KERNEL-BASED NONLINEAR FEATURE EXTRACTION FOR IMAGE CLASSIFICATION**
*Po-Wen Chou, Pi-Fuei Hsieh*

**TUP.L.5** **TEXTURE ANALYSIS AND ITS APPLICATION FOR SINGLE-BAND SAR THEMATIC INFORMATION EXTRACTION**
*Deyong Hu, Wenji Zhao, Xiaojuan Li, Huili Gong*

**TUP.L.6** **EMPIRICAL MODE DECOMPOSITION PRE-PROCESS FOR HIGHER ACCURACY HYPERSPECTRAL IMAGE CLASSIFICATION**
*Begüm Demir, Sarp Ertürk*

**TUP.L.7** **ADABOOST-NWFE CLASSIFICATION SCHEME FOR HYPERSPECTRAL IMAGE**
*Hsiao-Yun Huang, Bor-Chen Kuo, Yu-Ling Lee*

**TUP.L.8** **WAVELET PACKET TREE PRUNING METRICS FOR HYPERSPECTRAL FEATURE EXTRACTION**
*Terrance West, Lori Bruce, Saurabh Prasad*

## TUP.M: Tuesday, July 8, 17:00 - 18:30

**TUP.M** **Multitemporal Processing**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area M
Co-Chairs: Emmanuel Trouve and Francesca Bovolo

**TUP.M.1** **SPATIO-TEMPORAL SEGMENTATION BASED ON SUBSEQUENCES OF SATELLITE IMAGE TIME SERIES**
*Stefaan Lhermitte, Willem W. Verstraeten, Pol Coppin, Jan Verbesselt*

**TUP.M.2** **ESTIMATING BIOPHYSICAL VARIABLES AT 250 M WITH RECONSTRUCTED EOS/MODIS TIME SERIES TO MONITOR FRAGMENTED LANDSCAPES**
*Rémi Lecerf, Laurence Hubert-Moy, Frédéric Baret, Bassam Abdel Latif, Thomas Corpetti, Hervé Nicolas*

**TUP.M.3** **COMPARAISON OF MULTITEMPORAL MODIS-EVI SMOOTHING ALGORITHMS AND ITS CONTRIBUTION TO CROP MONITORING**
*Damien Arvor, Milton Jonathan, Margareth Simões Penello Meirelles, Vincent Dubreuil, Rémi Lecerf*

**TUP.M.4** **A SEMI-PHYSICAL APPROACH FOR GENERATION OF TEMPORALLY COMPLETE DAILY NADIR BRDF-ADJUSTED MODIS REFLECTANCE TIME SERIES**
*Junchang Ju, David Roy*

**TUP.M.5** **INFERRING DEFORMATION FIELDS FROM MULTIDATE SATELLITE IMAGES**
*André Jalobeanu, Delphine Fitzenz*



## TUP.N: Tuesday, July 8, 17:00 - 18:30

**TUP.N** **Hyperspectral: Compression and Implementation**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area N
Co-Chairs: Antonio Plaza and Yuliya Tarabalka

**TUP.N.1** **HYPERSPECTRAL-IMAGES COMPRESSION BASED ON THE PROTECTION OF INFORMATION OF INTEREST**
*Junping Zhang, Weiming Peng, Yushi Chen, Ye Zhang*

**TUP.N.2** **AN EFFICIENT ON-BOARD LOSSLESS COMPRESSION DESIGN FOR REMOTE SENSING IMAGE DATA**
*Guoxia Yu, Tanya Vladimirova, Martin Sweeting*

**TUP.N.3** **ANOMALY-BASED HYPERSPECTRAL IMAGE COMPRESSION**
*Qian Du, Wei Zhu, James Fowler*

**TUP.N.4** **LOSSLESS COMPRESSION OF HYPERSPECTRAL IMAGERY VIA LOOKUP TABLES AND CLASSIFIED LINEAR SPECTRAL PREDICTION**
*Bruno Aiazzi, Luciano Alparone, Stefano Baronti*

**TUP.N.5** **IMPROVEMENTS TO 3D TARP CODING FOR THE COMPRESSION OF HYPERSPECTRAL IMAGERY**
*Jing Zhang, James Fowler, Qian Du, Guizhong Liu*

**TUP.N.6** **PARALLEL DATA COMPRESSION FOR HYPERSPECTRAL IMAGERY**
*He Yang, Qian Du, Wei Zhu, Ioana Banicescu, James Fowler*

**TUP.N.7** **PARALLEL PROCESSING FOR NORMAL MIXTURE MODELS OF HYPERSPECTRAL DATA USING A GRAPHICS PROCESSOR**
*Yuliya Tarabalka, Trym Vegard Haavardsholm, Ingebjørg Kåsen, Torbjørn Skauli*

**TUP.N.8** **A PARALLEL SIMULATED ANNEALING APPROACH TO BAND SELECTION FOR HYPERSPECTRAL IMAGERY**
*Yang-Lang Chang, Jyh-Perng Fang, Wen-Yew Liang, Hsuan Ren, Kun-Shan Chen*

**TUP.N.9** **TOWARDS THE DEFINITION OF A FLEXIBLE HYPERSPECTRAL PROCESSING CHAIN: PRELIMINARY CASE STUDY USING HIGH-RESOLUTION URBAN DATA**
*Jacopo Nairoukh, Giovanna Trianni, Antonio Plaza, Paolo Gamba, Fabio Dell'Acqua*

## TUP.O: Tuesday, July 8, 17:00 - 18:30

**TUP.O** **Multispectral and Hyperspectral Image Analysis and Classification**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area O
Co-Chairs: Hrishikesh Bhattacharya and Bor-Chen Kuo

**TUP.O.1** **A NOVEL FUZZY C-MEANS METHOD FOR HYPERSPECTRAL IMAGE CLASSIFICATION**
*Bor-Chen Kuo, Wen-Chun Huang, Hsiang-Chuan Liu, Shiau-Chian Tseng*

**TUP.O.2** **KERNEL-BASED K-NN AND GAUSSIAN CLASSIFIERS FOR HYPERSPECTRAL IMAGE CLASSIFICATION**
*Bor-Chen Kuo, Jinn-Min Yang, Tian-Wei Sheu, Szu-Wei Yang*

**TUP.O.3** **IMPACT OF SEARCH STRATEGIES TO IMPROVEMENT OF N-FINDR ALGORITHM IN HYPERSPECTRAL DATA**
*Omid Ghaffari, Barat Mojaradi, Amir Moini Rad, Mohammad Javad Valadan Zoej, Hamid Ebadi*

**TUP.O.4** **AUGMENTING A HIERARCHICAL CLASSIFIER FOR HYPERSPECTRAL DATA BY EXPLOITING SPATIAL CORRELATION**
*Hrishikesh Bhattacharya, Aditya Saurabh*

**TUP.O.5** **CLASSIFICATION OF HYPERSPECTRAL REMOTE SENSING IMAGES USING GAUSSIAN PROCESSES**
*Yakoub Bazi, Farid Melgani*

**TUP.O.6** **AN IMPROVED HYPERSPECTRAL MAPPING USING MULTIPLE CLASSIFIER COMBINATION**
*Xingping Wen, Guangdao Hu, Xiaofeng Yang*

**TUP.O.7** **A PARALLEL APPROACH FOR INITIALIZATION OF HIGH-ORDER STATISTICS ANOMALY DETECTION IN HYPERSPECTRAL IMAGERY**
*Hsuan Ren, Yang-Lang Chang*

## TUP.P: Tuesday, July 8, 17:00 - 18:30

**TUP.P** **High Resolution Optical Data Processing**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area P
Co-Chairs: Andrea Garzelli and Mathieu Fauvel

**TUP.P.1** **SUPERVISED REGION-BASED SEGMENTATION OF QUICKBIRD MULTISPECTRAL IMAGERY**
*Ben Wuest*

**TUP.P.2** **HIGH RESOLUTION REMOTE SENSING IMAGE ANALYSIS WITH EXOGENOUS DATA: A GENERIC FRAMEWORK**
*Vincent Poulain, Jordi Inglada, Marc Spigai*

**TUP.P.3** **STEGONOGRAPHY FOR HIGH-RESOLUTION COLOR REMOTE SENSING IMAGE**
*Xianmin Wang, Ruiqing Niu*

**TUP.P.4** **QUICKBIRD PANCHROMATIC IMAGES FOR MAPPING DAMAGE AT BUILDING SCALE CAUSED BY THE 2003 BAM EARTHQUAKE**
*Marco Chini, Christian Bignami, William J. Emery, Nazzareno Pierdicca, Salvatore Stramondo*

**TUP.P.5** **A COMBINED GLOBAL AND LOCAL APPROACH FOR AUTOMATED REGISTRATION OF HIGH-RESOLUTION SATELLITE IMAGES USING OPTIMUM EXTREMA POINTS**
*Yonghong Li, Curt H. Davis*

**TUP.P.6** **SHADOW SEGMENTATION AND COMPENSATION IN HIGH RESOLUTION SATELLITE IMAGES**
*Haijian Ma, Qiming Qin, Xinyi Shen*

**TUP.P.7** **THE RESEARCH ON IMAGE CLASSIFICATION OF REMOTE SENSING BASED ON AN IMPROVED NEURAL NETWORK**
*Mu Bai, Huiping Liu, Wenli Huang, Xiaoluo Zhou, Xiaodong Mu*

**TUP.P.8** **A STUDY FOR NEAR-SHORE CHARACTERIZATION USING HIGH-RESOLUTION HYPERSPECTRAL AND MULTISPECTRAL IMAGES**
*Giuliana Pennucci, Raffaele Grasso, Charles Trees*

## TUP.Q: Tuesday, July 8, 17:00 - 18:30

**TUP.Q** **Image Processing: Calibration and Correction**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Q
Co-Chairs: WeeJuan Tan and Nick Younan

**TUP.Q.1** **AN ALGORITHM TO CALIBRATE FIELD CAMERAS FOR STEREO CLOUDS**
*Jiuxiang Hu, Anshuman Razdan, Joseph Zehnder*

**TUP.Q.2** **FAST COLOUR BALANCE ADJUSTMENT OF IKONOS IMAGERY USING CUDA**
*Yong Kiat Allan Tan, Wee Juan Tan, Leong Keong Kwoh*

**TUP.Q.3** **GLOBAL SENSITIVITY ANALYSIS OF ATMOSPHERIC CORRECTION MODELS FOR REMOTE SENSING APPLICATIONS**
*Nicholas Hamm, Jadunandan Dash*

**TUP.Q.4** **IMPROVED MSG-SEVIRI IMAGES CLOUD MASKING AND EVALUATION OF ITS IMPACT ON THE FIRE DETECTION METHODS**
*Enrico Cadau, Giovanni Laneve*

**TUP.Q.5** **HIGHLY ACCURATE GEOMETRIC CORRECTION FOR NOAA AVHRR DATA CONSIDERING THE VARIATION OF ELEVATION AND THE FEATURE OF COASTLINE**
*An Ngoc Van, Mitsuru Nakazawa, Yoshimitsu Aoki*

**TUP.Q.6** **POSITION ESTIMATION USING TEXTURE INFORMATION IN NOAA-AVHRR DATA FOR GEOMETRIC CORRECTION**
*Yoichi Kageyama, Yoshiaki Shoji, Makoto Nishida*

**TUP.Q.7** **CONSTRUCTION OF AN IMAGE QUALITY ASSESSMENT MODEL FOR USE ON BOARD AN LEO SATELLITE**
*Izak van Zyl Marais, Willem Herman Steyn, Johan Adam du Preez*

**TUP.Q.8** **INFLUENCE OF CAMERA DISTORTIONS IN SATELLITE IMAGE REGISTRATION AND CHANGE DETECTION APPLICATIONS**
*Francois Ayoub, Sebastien Leprince, Renaud Binet, Kevin Lewis, Oded Aharonson, Jean-Philippe Avouac*

**TUP.Q.9** **SINGULAR UNIT RESTORATION BASED ON COMPLEX-VALUED MARKOV RANDOM FIELD MODEL FOR INSAR INTERFEROGRAMS**
*Ryo Yamaki, Akira Hirose*

## TUP.R: Tuesday, July 8, 17:00 - 18:30

**TUP.R** **Spatial Resolution - Registration**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area R
Co-Chairs: Paul Chippendale and Francesca Bovolo

**TUP.R.1** **SPATIAL RESOLUTION ENHANCEMENT OF SMOS DATA: A COMBINED FOURIER WIENER APPROACH**
*Maria Piles, Adriano Camps, Mercè Vall-llossera, Marco Talone*

**TUP.R.2** **USING SYNTHETIC VARIABLE RATIO METHOD TO FUSE MULTI-SOURCE REMOTELY SENSED IMAGES BASED ON SENSOR SPECTRAL RESPONSE**
*Shen Chen, Jiancheng Luo, Zhanfeng Shen, Geping Luo, Changming Zhu*

**TUP.R.3** **RESEARCH ON IMPROVING SPATIAL RESOLUTION OF RS IMAGES BASED ON QUAD-TREE DECOMPOSITION**
*Yonghua Sun, Xiaojuan Li, Huili Gong, Chunping Zhou*

**TUP.R.4** **A NOVEL STRATEGY FOR PRECISE GEOMETRIC REGISTRATION OF GIS AND SATELLITE IMAGES**
*Qi Li, Isao Sato, Fumihiro Sakuma*

**TUP.R.5** **MULTI-SENSOR IMAGE FUSION BASED ON TRANSFERABLE PARAMETERS**
*Junping Zhang, Chen Qi, Wenyan Tang*

**TUP.R.6** **A PROGRESSIVE REFINEMENT APPROACH TO AERIAL IMAGE REGISTRATION USING LOCAL TRANSFORM PERTURBATIONS**
*Stephen DelMarco, Helen Webb, Victor Tom, Todd Jenkins*

**TUP.R.7** **UAV-VIDEO REGISTRATION USING BLOCK-BASED FEATURES**
*Adel Hafiane, Kannappan Palaniappan*

**TUP.R.8** **A NOVEL FEATURE ENHANCED MMI BASED REGISTRATION ALGORITHM FOR AUTOMATED MAPS AND IMAGES**
*Xiaofeng Fan, Harvey Rhody, Eli Saber*

**TUP.R.9** **AUTOMATIC REGISTRATION OF OPTICAL IMAGES, A STAKE FOR FUTURE MISSIONS: APPLICATION TO ORTHO-RECTIFICATION, TIMES SERIES AND MOSAIC PRODUCTS**
*Simon Baillarin, Patrick Gigord, Olivier Hagolle*

**TUP.R.10** **SPATIAL AND TEMPORAL ATTRACTIVENESS ANALYSIS THROUGH GEO-REFERENCED PHOTO ALIGNMENT**
*Paul Chippendale, Michele Zanin, Claudio Andreatta*

## TUP.S: Tuesday, July 8, 17:00 - 18:30

**TUP.S** **Lidar Sensors and Applications II**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area S
Co-Chairs: Clint Slatton and John Reagan

**TUP.S.1** **OVERVIEW OF WIND LIDAR TECHNIQUES AND CURRENT RELATED DEVELOPMENTS AT THE TECHNICAL UNIVERSITY OF CATALONIA**
*Sergio Tomás, Constantino Muñoz, Michaël Sicard, Francesc Rocadenbosch, Alejandro Rodríguez, Adolfo Comerón*

**TUP.S.2** **SIMULATIONS OF SPACE-BASED CO2 MEASUREMENTS: MEASUREMENT IMPACTS ON MESOSCALE TRANSPORT MODELING**
*T. Scott Zaccheo, Thomas Connor, Janusz Eluszkiewicz, Michael Dobbs, Hilary Snell*

**TUP.S.3** **ASIAN DUST AND AIR POLLUTION AEROSOL MONITORING LIDAR NETWORK**
*Nobuo Sugimoto, Ichiro Matsui, Atsushi Shimizu, Tomoaki Nishizawa*

**TUP.S.4** **SPACE BORNE LASER AND LIDAR AIRBORNE EXPERIENCES AT L'ESTARTIT (SPAIN)**
*Juan Jose Martinez-Benjamin, Bob Schutz, Timothy Urban, Miquel Angel Ortiz Castellon*

**TUP.S.5** **USING THE SCOTT AND LONGUET-HIGGINS ALGORITHM AND NEURAL NETWORKS TO REGISTER IKONOS IMAGES AND LIDAR-BASED DEMS**
*Ahmed F. Elaksher, Samir Shariff*

**TUP.S.6** **ACCURACY ANALYSIS OF GEO-REFERENCING BY VEHICLE-BORNE POSITION AND ORIENTATION SYSTEM IN LASER SCANNING**
*Ruofei Zhong, Yongwei Kang, Weibing Feng, Jianxi Huang*

**TUP.S.7** **STUDY ON THE RESOLUTION OF LASER SCANNING POINT CLOUD**
*Ling Zhu, Yuqing Mu, Ruoming Shi*

**TUP.S.8** **EXACT TOPOLOGICAL BOUNDARY TRACING FOR BUILDING MODEL RECONSTRUCTION FROM AIRBORNE LASER DATA**
*Xianfeng Huang, Xiaoguang Cheng, Fan Zhang, Jianya Gong, Hui Li*

**TUP.S.9** **STUDY AND ANALYSIS ON THE SINGLE FACTORS OF LANDSLIDE BASED ON GIS**
*Qiu Li, Hongyang Cao, Changao Shi*

**TUP.S.10** **LASER INTENSITY USED IN CLASSIFICATION OF LIDAR POINT CLOUD DATA**
*Hui Li, Liping Di, Xianfeng Huang, Deren Li*

**TUP.S.11** **AUTOMATIC BUILDING DETECTION AND EXTRACTION FROM LIDAR POINT CLOUD DATA AND HIGH-RESOLUTION IMAGERY**
*Nima Ekhtari, Mohammad Javad Valadan Zoej, Mahmod Reza Sahebi, Ali Mohammadzadeh*

## TUP.T: Tuesday, July 8, 17:00 - 18:30

**TUP.T** **Lidar Sensors and Applications III**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area T
Co-Chairs: Clint Slatton and Melba Crawford

**TUP.T.1** **THE USE OF THE SHOALS WAVEFORMS TO ASSESS HABITAT COMPLEXITY WITHIN THE BENTHOSCAPE**
*Antoine Collin, Bernard Long, Philippe Archambault*

## TUP.U: Tuesday, July 8, 17:00 - 18:30

**TUP.U** **Microwave Synthetic Aperture Radiometers I**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area U
Co-Chairs: Ignasi Corbella and Francesc Torres

**TUP.U.1** **INITIAL RESULTS OF THE PASSIVE ADVANCED UNIT SYNTHETIC APERTURE (PAU-SA)**
*Isaac Ramos-Pérez, Enric Valencia, Adriano Camps, Xavier Bosch-Lluis, Juan Fernando Marchán-Hernandez, Nereida Rodríguez-Álvarez, Francisco Canales-Contador, Marco Donadio*

**TUP.U.2** **FAST PROCESSING TOOL FOR SMOS DATA**
*Ignasi Corbella, Francesc Torres, Nuria Duffo, Veronica Gonzalez, Adriano Camps, Mercè Vall-llossera*

**TUP.U.3** **A GENERAL PLATFORM FOR MILLIMETER WAVE SYNTHETIC APERTURE RADIOMETER**
*Qingxia Li, Fei Hu, Wei Guo, Ke Chen, Liang Lang, Jing Zhang, Yaoting Zhu, Zuyin Zhang*

**TUP.U.4** **A RECTANGULAR ARRAY FOR MOTION INDUCED SYNTHETIC APERTURE RADIOMETER**
*Hyuk Park, Sung-Hyun Kim, Ho-Jin Lee, Nam-Won Moon, Yong-Hoon Kim*

**TUP.U.5** **ASSESSMENT ON LINEARITY ERRORS IN DETECTORS FOR INTERFEROMETRIC RADIOMETERS**
*Francesc Torres, Nuria Duffo, Cristina González-Haro, Roger Vilaseca, Lluís Sagués, Manuel Martín-Neira*

**TUP.U.6** **THE SMOS MISSION PRESENT STATUS AND FUTURE PLANS**
*Yann Kerr, Philippe Waldteufel, Jordi Font, Achim Hahne, Susanne Mecklenburg*

**TUP.U.7** **SMOS SYSTEM PERFORMANCES BASED ON END-TO-END SIMULATIONS**
*Francois Cabot, Philippe Richaume, Arnaud Mialon, Yann Kerr*

**TUP.U.8** **IMAGE RETRIEVAL SIMULATIONS FOR THE GEO ATMOSPHERIC SOUNDER (GAS)**
*Anders Carlström, Jacob Christensen, Anders Emrich, Peter de Magt*

**TUP.U.9** **CONCEPTUAL DESIGN OF THE GEOSTATIONARY INTERFEROMETRIC MICROWAVE SOUNDER (GIMS)**
*Hao Liu, Ji Wu, Shengwei Zhang, Jingye Yan*

## TUP.V: Tuesday, July 8, 17:00 - 18:30

**TUP.V** **Microwave Real Aperture Radiometers: Technology and Calibration I**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area V
Co-Chairs: Albin Gasiewski and Francesc Torres

**TUP.V.1** **DUAL-643GHZ AND 874GHZ AIRBORNE RADIOMETERS FOR ICE CLOUD MEASUREMENTS**
*Zhaonan Zhang, Bryan Monosmith*

**TUP.V.2** **PAU ONE-RECEIVER AIRBORNE INSTRUMENT: INITIAL RESULTS**
*Enric Valencia, Xavier Bosch-Lluis, Adriano Camps, Albert Aguasca, Nereida Rodríguez-Álvarez, Isaac Ramos-Pérez, Juan Fernando Marchán-Hernandez, Mathilde Glenat, Francesc Bou*

**TUP.V.3** **COMPACT DUAL POLARIZATION FEEDING SYSTEM OF HY-2 CALIBRATION RADIOMETER**
*Hongjian Wang, Bin Fan*

**TUP.V.4** **BRIGHTNESS TEMPERATURE RETRIEVAL WITH SCALE-MODEL ANTENNA PATTERNS OF THE AQUARIUS L-BAND RADIOMETER**
*Seung-Bum Kim, Frank Wentz*

**TUP.V.5** **POST-LAUNCH ASSESSMENT OF THE METOP-A AMSU-A PERFORMANCE**
*Tsan Mo*

**TUP.V.6** **FY-3 MICROWAVE HUMIDITY SOUNDER T/V TEST AND CALIBRATION**
*Zhenzhan Wang, Jing Li, Qiong Wu, Shengwei Zhang, Baoyu He, Zhenfan Zheng, Jing-Shan Jiang, Heguang Liu*

**TUP.V.7** **DESIGN AND TEST OF A NEW TRUCK-MOUNTED MICROWAVE RADIOMETER FOR REMOTE SENSING RESEARCH**
*Shaojie Zhao, Lixin Zhang, Zhongjun Zhang*

**TUP.V.8** **RADIOMETRIC CALIBRATION OF KOREAN SPACEBORNE MICROWAVE RADIOMETER DREAM**
*Sung-Hyun Kim, Ho-Jin Lee, Nam-Won Moon, Jin-Taek Seong, Hoon Wi, Eun-Sup Sim, De-Hai Zhang, Jing-Shan Jiang, Yong-Hoon Kim*

**TUP.V.9** **PROCESSING TECHNIQUES TO MITIGATE EOS AMSU-A CALIBRATION ANOMALIES**
*Kent Anderson*

**TUP.V.10** **SPURIOUS 3RD AND 4TH STOKES SIGNALS ("SHADOWING") IN POLARIMETRIC MICROWAVE RADIOMETRY OVER THE OCEANS: ORIGIN, CHARACTERISTICS, AND MITIGATION**
*Craig Smith, David Thompson*

## TUP.W: Tuesday, July 8, 17:00 - 18:30

**TUP.W** **Microwave Real Aperture Radiometers: Technology and Calibration II**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area W
Co-Chairs: Albin Gasiewski and Francesc Torres

**TUP.W.1** **COMBINED AIRBORNE RADIO-INSTRUMENTS FOR OCEAN AND LAND STUDIES (CAROLS)**
*Mehrez Zribi, Mickaël Pardé, Danièle Hauser, Pascal Fanise, Paul Leroy, Monique Dechambre, Niels Skou, Sten Søbjærg, Jacqueline Boutin, Jean-Christophe Calvet, Gilles Reverdin, Nicolas Reul, Jean Pierre Wigneron*

**TUP.W.2** **CAROLS CAMPAIGN: SCIENTIFIC DATA ANALYSIS RESULTS**
*Mickaël Pardé, Mehrez Zribi, Danièle Hauser, Paul Leroy, Pascal Fanise, Sonia Zine, Nicolas Reul, Jacqueline Boutin*

## TUP.X: Tuesday, July 8, 17:00 - 18:30

**TUP.X** **Infrared and Passive Microwave Satellite Missions**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area X
Co-Chairs: Karen StGermain and Evert Attema

**TUP.X.1** **EARLY PERFORMANCE PREDICTIONS OF LAND ENVIRONMENTAL DATA RECORDS FOR THE NPOESS PREPARATORY PROJECT VISIBLE/INFRARED IMAGER RADIOMETER SUITE (VIIRS) SENSOR**
*Bonnie Reed, Bruce Guenther, Carl Hoffman, Heather Kilcoyne, Karen St. Germain*

**TUP.X.2** **EARLY PERFORMANCE PREDICTIONS OF OCEAN ENVIRONMENTAL DATA RECORDS FOR THE NPOESS PREPARATORY PROJECT VISIBLE/INFRARED IMAGER RADIOMETER SUITE (VIIRS) SENSOR**
*Bonnie Reed, Bruce Guenther, Carl Hoffman, Heather Kilcoyne, Karen St. Germain*

**TUP.X.3** **EARLY PERFORMANCE PREDICTIONS OF THE CLOUD ENVIRONMENTAL DATA RECORDS FOR THE NPOESS PREPARATORY PROJECT VISIBLE/INFRARED IMAGER RADIOMETER SUITE (VIIRS) SENSOR**
*Heather Kilcoyne, Bruce Guenther, Karen St. Germain, Bonnie Reed, Carl Hoffman*

**TUP.X.4** **EARLY PERFORMANCE PREDICTIONS OF THE AEROSOL ENVIRONMENTAL DATA RECORDS FOR THE NPOESS PREPARATORY PROJECT VISIBLE/INFRARED IMAGER RADIOMETER SUITE (VIIRS) SENSOR**
*Heather Kilcoyne, Bruce Guenther, Karen St. Germain, Bonnie Reed, Carl Hoffman*

**TUP.X.5** **NPOESS: ITS POTENTIAL ROLE IN AN EMERGING CLIMATE MONITORING SYSTEM FOR THE NEXT GENERATION AND THE ONE AFTER**
*Stephen Mango*

**TUP.X.6** **RADIOMETRIC VALIDATION OF MICROWAVE SATELLITE INSTRUMENTS USING THE NPOESS AIRCRAFT SOUNDER TESTBED-MICROWAVE (NAST-M) SENSOR**
*Laura Jairam, Laura Bickmeier, William Blackwell, R. Vincent Leslie, Fred Chen*

**TUP.X.7** **RADIOMETRIC PERFORMANCE OF CLOUDS AND THE EARTH'S RADIANT ENERGY SYSTEM (CERES) INSTRUMENT SENSORS ABOARD EOS TERRA AND AQUA SPACECRAFT**
*Susan Thomas, Kory Priestley, Denise Cooper, Phillip Hess, Z. Peter Szewczyk, Dale Walikainen, Robert Wilson*

**TUP.X.8** **INTER-SATELLITE VALIDATION OF DECADAL SCALE PASSIVE MICROWAVE CLIMATE DATA RECORDS**
*Shannon Brown, Shailen Desai, Wenwen Lu*

**TUP.X.9** **INTER-SATELLITE RADIOMETER CALIBRATION OF WINDSAT, TMI AND SSMI**
*Kaushik Gopalan, W. Linwood Jones, Takis Kasparis, Thomas Wilheit*

**TUP.X.10** **USE OF DISCOVER MICROWAVE OCEAN PRODUCTS IN CLIMATE STUDIES**
*Deborah Smith, Kyle Hilburn, Frank Wentz, Chelle Gentemann*

**TUP.X.11** **PROSPECTED RADIO OCCULTATION MISSION FOR GLOBAL WEATHER MONITORING AND PREDICTION**
*Chen-Joe Fong, Nick Yen, Vicky Chu, Yuei-An Liou, Sien Chi*

## TUP.Y: Tuesday, July 8, 17:00 - 18:30

**TUP.Y** **Landslides and Geological Hazards**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Y
Co-Chairs: Richard Gloaguen and Xun Luo

**TUP.Y.1** **THE GEOMORPHOMETRY OF RAINFALL-INDUCED LANDSLIDES IN ALISHAN AREA OBTAINED BY AIRBORNE LIDAR AND DIGITAL PHOTOGRAPHY**
*Jin-King Liu, Zu-Yi Liao, Chi-Chung Lau, Tian-Yuan Shih, Pai-Hui Hsu*

**TUP.Y.2** **MULTI-PARAMETER REMOTE SENSING ANOMALIES BEFORE MAJOR EARTHQUAKES IN CHINA**
*Jinping Li, Lixin Wu, Huanping Wu, Zhiyong Wen, Shanjun Liu*

**TUP.Y.3** **PREDICTION ON CHANGES OF PERMAFROST IN NORTHEASTERN CHINA DURING THE 21ST CENTURY USING THE COMBINATION OF THE EQUIVALENT-LATITUDE AND FINITE ELEMENT MODELS**
*Zhi Wei, Huijun Jin, Jianming Zhang*

**TUP.Y.4** **LOESS MAGNETIC SUSCEPTIBILITY IN CENTRAL ASIA AND ITS PALEOCLIMATIC SIGNIFICANCE**
*Yougui Song, Hongmei Dong*

**TUP.Y.5** **ASSESSING IMAGE PROCESSING TECHNIQUES FOR MAPPING LANDSLIDES**
*Karen Joyce, Grant Dellow, Phil Glassey*

**TUP.Y.6** **REGIONAL LANDSLIDE HAZARD ASSESSMENT BASED ON DISTANCE EVALUATION MODEL**
*Jiacun Li, Jin Li*

**TUP.Y.7** **REGIONAL LANDSLIDE HAZARD ASSESSMENT BASED ON PROBABILITY INDEX MODEL**
*Jiacun Li, Jing Li*

**TUP.Y.8** **LAND SUBSIDENCE INVESTIGATION ALONG RAILWAY USING PERMANENT SCATTERER SAR INTERFEROMETRY**
*Daqing Ge, Yan Wang, Xiaofang Guo, Yi Wang*

**TUP.Y.9** **LANDSLIDE HAZARD ASSESSMENT IN THE THREE GORGES OF THE YANGTZE RIVER WITH TRMM DATA**
*Lina Xu, Ruiqing Niu, Xianmin Wang, Ling Peng, Ting Wu, Shengli Wu*

**TUP.Y.10** **EXPERIMENTAL STUDY ON RELATIONSHIP BETWEEN STRAIN FIELD AND THERMAL FIELD OF LOADING ROCK**
*Shanjun Liu, Guoliang Li, Qunlong Chen, Lixin Wu*

**TUP.Y.11** **EXPERIMENTAL STUDY ON RELATIONSHIP BETWEEN DEFORMATION FIELD AND TEMPERATURE FIELD BEFORE EARTHQUAKE**
*Shanjun Liu, Lixin Wu, Guoliang Li, Qunlong Chen*

## TUP.Z: Tuesday, July 8, 17:00 - 18:30

**TUP.Z** **Geological Applications of Radar**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Z
Co-Chairs: Saibun Tjuatja and Dieter Eisenburger

**TUP.Z.1** **KEY TECHNIQUES OF PS INSAR IN MONITORING DANGXIONG FAULT MOVEMENT**
*Jingfa Zhang*

**TUP.Z.2** **CR-BASED SAR-INTERFEROMETRY FOR LANDSLIDE MONITORING**
*Ye Xia*

**TUP.Z.3** **THE APPLICATION OF INSAR TO CHINO BASIN HYDROGEOLOGIC ANALYSIS AND RESOURCE MANAGEMENT**
*David Cohen, Andrew Malone, Francis Riley*

**TUP.Z.4** **MAI (MULTIPLE APERTURE INTERFEROGRAM) GENERATION FROM INTERFEROMETRIC PAIR WITH LARGE SURFACE DISPLACEMENT**
*Hyung-Sup Jung, Joong-Sun Won, Zong Lu, Min-Jeong Jo, Wook Park*

**TUP.Z.5** **A STUDY ON USING PASSIVE SUPER LOW FREQUENCY ELECTROMAGNETIC WAVE TO EXPLORE GOBS IN MINE**
*Xia Ye, Qiming Qin, Baishou Li, Zexun Zhang*

**TUP.Z.6** **INSAR ANALYSIS OF LAND SUBSIDENCE CAUSED BY GROUNDWATER EXPLOITATION IN CHANGPING, BEIJING, CHINA**
*Youquan Zhang, Huili Gong, Xiaojuan Li, Taiguang Liu, Wen Yang, Beibei Chen, Angsheng Li, Yaoming Su*

**TUP.Z.7** **A MODEL OF IN-DEPTH DISPLACEMENT UNDER MS8.1 AT KUNLUN EARTHQUAKE WITH D-INSAR CO-SEISMIC DEFORMATION FIELD**
*Ma Chao, Zhang Guifang, Ma Xuedong, Shan Xinjian*

## TUP.AA: Tuesday, July 8, 17:00 - 18:30

**TUP.AA** **Geological Applications and GIS**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area AA
Co-Chairs: Massimiliano Pieraccini and Eman Ghoneim

**TUP.AA.1** **USING REMOTE SENSING FOR MAPPING THE EFFECTS OF NATURAL HAZARDS IN NEW ZEALAND**
*Karen Joyce, Sergey Samsonov, Richard Jongens, Julie Lee, Phil Glassey*

**TUP.AA.2** **ASSESSING EXPANSIVE SOIL ENGINEERING PARAMETERS USING SPECTROSCOPY**
*Fekerte Arega, Freek van der Meer, Harald van der Werff, Wolter Zigterman*

**TUP.AA.3** **GEOLOGICAL LINEAMENT EXTRACTION FOR THE CHARACTERIZATION OF UNDERGROUND CAVERN CONSTRUCTION SITE IN KOREA**
*Chang-Uk Hyun, Hyeong-Dong Park*

**TUP.AA.4** **REMOTE SENSING ANALYSIS OF NEOTECTONICS IN PAMIR USING DEM: RIVER PROFILE APPROACH**
*Syed Amer Mahmood, Richard Gloaguen, Faisal Shahzad*

**TUP.AA.5** **USE OF MULTISPECTRAL DATA EXTRACTING INFORMATION OF GOLD ORE BEARING ROCKS BY MPH TECHNIQUE IN HATU GOLD OCCURRENCE AREA IN WESTERN CHINA**
*Jianwen Ma, Fangyan Yuan, Yijin Chen, Xue Chen*

**TUP.AA.6** **INTEGRATION OF INTEGRATED MINERAL POTENTIAL MAPS OF GOLD-SILVER DEPOSITS USING GIS**
*Hyun-Joo Oh, Saro Lee*

**TUP.AA.7** **DEVELOPMENT OF INTEGRATED EARTHQUAKE-INDUCED LANDSLIDE-SUSCEPTIBILITY MAPS USING GIS**
*Saro Lee, Hyun-Joo Oh*

**TUP.AA.8** **REMOTE SENSING BASED OIL-GAS POTENTIALS EVALUATION IN THE WEST SLOPE OF SONGLIAO BASIN BASIN, NORTHEAST CHINA**
*Shengbo Chen, Xuqing Zhang, Zhiguo Meng*

**TUP.AA.9** **DISCRIMINATION OF GEOLOGICAL END MEMBERS USING HYPERION IMAGERY: PRELIMINARY RESULTS, BIG BEND NATIONAL PARK, TEXAS**
*David Leverington*

## TUP.BB: Tuesday, July 8, 17:00 - 18:30

**TUP.BB** **Geographic Information Science Tools**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area BB
Chair: Surya Durbha

**TUP.BB.1** **SEMANTIC REPRESENTATION OF GEOGRAPHIC CONCEPT BASED ON ONTOLOGY PROPERTY**
*Hong Wang, Lin Li, Ping-Chao Song*

**TUP.BB.2** **TRUST MANAGEMENT MODEL IN DISTRIBUTE GIS**
*Kun Fang*

**TUP.BB.3** **A SEMANTIC SEARCH ENGINE FOR SPATIAL WEB PORTALS**
*Wenwen Li, Chaowei Yang*

**TUP.BB.4** **RESEARCH ON QUERYING FOR METADATA SERVICE BASED ON GEO-ONTOLOGY**
*Yunpeng Yan, Wenchen Jia, Zhengmin He*

**TUP.BB.5** **ANALYSIS OF THE SATELLITE IMAGES MISREGISTRATION ERRORS. A CASE STUDY FOR ROMANIA**
*Corina Alecu, Simona Oancea, Nektarios Chrysoulakis, Gheorghe Stancalie*

**TUP.BB.6** **A TWO-PHASE LOAD-BALANCING FRAMEWORK OF PARALLEL GIS OPERATIONS**
*Zhong Xie, Zi Ye, Liang Wu*

**TUP.BB.7** **UTILIZING GRID COMPUTING TO SUPPORT NEAR REAL-TIME GEOSPATIAL APPLICATIONS**
*Jibo Xie, Chaowei Yang, Ying Cao, Menas Kafatos*

**TUP.BB.8** **INFORMATION SEMANTIC TOOLS FOR KNOWLEDGE DISCOVERY IN INTEGRATED OCEAN OBSERVING SYSTEM**
*Surya Durbha, Roger King, Nicolas Younan, Shruthi Bheemireddy, Santosh Akamanchi*

**TUP.BB.9** **THE DESIGN OF DYNAMIC GRID WORKFLOW WEB PORTAL FOR REMOTE SENSING INFORMATION SERVICE**
*Jianwen Ai, Yong Xue, Wei Wei, Jianping Guo, Guoping Lei, Shutao Hou, Yuqing Li, Fenghai Yang, Zhihua Wang*

**TUP.BB.10** **GLOSDC: A FRAMEWORK FOR A GLOBAL SPATIAL DATA CATALOG**
*Pengfei Wu, Yu Fang, Bin Chen*

## TUP.CC: Tuesday, July 8, 17:00 - 18:30

**TUP.CC** **Geographic Information Science Applications I**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area CC
Co-Chairs: Chi-Ren Shyu and Surya Durbha

**TUP.CC.1** **WATER TRANSFER SCHEMES SIMULATION BASED ON 3D GEOGRAPHIC VISUALIZATION AND COMPUTING**
*Siyuan Liu, Gaojin Wen, Wenjing Cao, Shengzhong Feng, Jianping Fan*

**TUP.CC.2** **DECISION-MAKING SUPPORT SYSTEM OF FLOOD DISASTER EMERGENCY RESPONSE: TECHNICAL DEMANDS, STATUS AND TRENDS**
*Zhuo-Wei Hu, Xiaojuan Li, Huili Gong, Yan-Bing Wang, Yan-Hui Wang*

**TUP.CC.3** **OPTIMIZATION OF URBAN DRAIN LAYOUT USING GIS**
*Dongwei Qiu, Shanshan Wan, Shuqiang Lv, Dean Luo*

**TUP.CC.4** **STUDY ON DECISION MAKING METEOROLOGICAL SERVICE SYSTEM BASED ON GEOGRAPHIC INFORMATION SYSTEM**
*Wu Huanping, Luo Bing, Tang Wei, Zheng Weijiang, Liu Shanjun*

**TUP.CC.5** **UTILIZATING GIS TO STUDY GROUNDWATER QUALITY EVALUATION AND ITS DISTRIBUTION IN NORTHERN ORDOS CRETACEOUS ARTISAN BASIN, CHINA**
*Yaoming Su, Lin Zhu, Huili Gong, Wenji Zhao*

**TUP.CC.6** **STUDY ON CHINA DIGITAL OCEAN PROTOTYPE SYSTEM**
*Xiansan Liu, Hui Qu, Xin Zhang, Tianhe Chi*

**TUP.CC.7** **AN APPROACH TO REDUCE BOUNDARY DISTORTION IN COMPRESSING GRID DEM DATA WITH WAVELET TRANSFORM**
*Zhanqiang Chang, Lixin Wu, Li Jiacun*

## TUP.DD: Tuesday, July 8, 17:00 - 18:30

**TUP.DD** **Geographic Information Science Applications II**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area DD
Co-Chairs: Nick Younan and Jim Tilton

**TUP.DD.1** **MULTI-SCALE VISUALIZATION FOR GIS ROAD FEATURES IN MOBILE APPLICATIONS SYSTEM**
*Yan-Hui Wang, Yan-Bing Wang, Zhuo-Wei Hu*

**TUP.DD.2** **ON THE GTP-BASED 3D MODELING METHOD FOR COMPLEX GEOLOGICAL BODY**
*De-Fu Che, Li-Xin Wu, Zuo-Ru Yin*

**TUP.DD.3** **ESTIMATION OF TERRAIN SLOPE USING A COMPENSATION-LAMBERTIAN METHOD FROM SINGLE-PASS POLSAR DATA**
*Yang Li, Wen Hong, Fang Cao, Yan-Ping Wang, Yi-Rong Wu*

**TUP.DD.4** **INTEGRATING 3D LASER SCANNING WITH DIGITAL PHOTOGRAMMETRY FOR INVESTIGATION ON DISEASES OF TIBET MURALS**
*Aiwu Zhang, Feng Gao, Shaoxing Hu, Guangjie Cai, Xiao Zhou*

**TUP.DD.5** **ACCESSIBILITY ASSESSMENT OF URBAN GREEN SPACE: A QUANTITATIVE PERSPECTIVE**
*Ze Liu, Feng Mao, Wensheng Zhou, Qiang Li, Jianxi Huang, Xianlong Zhu*

**TUP.DD.6** **K6N9-I MODEL: A HEXAHEDRON-BASED COMPUTABLE 3D TOPOLOGICAL RELATIONSHIP MODEL**
*Lixin Wu, Jiateng Guo*

**TUP.DD.7** **MATCHING RESEARCH OF OBJECT MODEL WITH TERRAIN IN MULTI-SCALE 3D SCENE**
*Ruoming Shi, Shengtao Lu*

**TUP.DD.8** **MAPPING MINERAL POTENTIAL BY COMBINING MULTI-SCALE AND MULTI-SOURCE GEO-INFORMATION**
*Wenlei Wang, Qiuming Cheng*

## TUP.EE: Tuesday, July 8, 17:00 - 18:30

**TUP.EE** **Geographic Information Science Outreach**
Session Type: Poster
Time: Tuesday, July 8, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area EE
Co-Chairs: Nel Ruffin and Marge Cole

**TUP.EE.1** **GIS OUTREACH AND EDUCATION FOR RURAL MISSISSIPPI IN A POST-KATRINA WORLD**
*Nel Ruffin*

**TUP.EE.2** **RESEARCH ON THE SHARING AND INTEROPERATION OF GEOSPATIAL INFORMATION BASED ON THE COMBINATION OF GRDI AND OGC**
*Yumei Sun, Yu Fang, Bin Chen, Jiayuan Lin, Lihong Bi*

**TUP.EE.3** **THE DESIGN AND IMPLEMENTATION OF ONLINE VIDEO-DISTRIBUTING SYSTEM BASED ON THE TECHNOLOGY OF VEHICLE-BORNE MOBILE DATA COLLECTION SYSTEM**
*Huilian Chen, Ruofei Zhong, Jianxi Huang*

**TUP.EE.4** **SERVING AURA HIRDLS LEVEL 2 DATA THROUGH OGC WCS**
*Peichuan Li, Liping Di, Genong Yu*

**TUP.EE.5** **AUGMENTING THE OGC WEB PROCESSING SERVICE WITH MESSAGE-BASED ASYNCHRONOUS NOTIFICATION**
*Min Min, Liping Di, Genong Yu, Nengcheng Chen*

**TUP.EE.6** **THREE DIMENSIONAL TERRAIN VISUALIZATION ON THE INTERNET USING NURBS METHOD**
*Xiao Wang, Xiuwan Chen*

**TUP.EE.7** **A HIGH PERFORMANCE COMMUNICATION PROGRAM FOR A GPS-BASED VEHICLE TRACING MOBILE PLATFORM**
*Qifeng Zhao, Hong Fan, Qinhan Lian*

**TUP.EE.8** **DESIGN AND IMPLEMENTATION OF COMMON MAP SYMBOL SYSTEM IN GIS**
*Miao Yu, Meixian Sun, Xiaojuan Li, Weiguang Zhang, JunHua Teng*

## WE1.210: Wednesday, July 9, 08:20 - 10:00

### Panel Session

**WE1.210** **Earth Science Decadal Survey NASA Missions**
Session Type: Panel
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 210
Chair: Kamal Sarabandi
About: The National Academy of Sciences recently released the "Earth Science and Applications from Space: National Imperatives for the next Decade and Beyond" report that is also known as the Earth Science Decadal Survey. Over one hundred mission concepts were submitted by the community and six science panels evaluated them. The Decadal Survey recommended seventeen high priority missions grouped into four tiers - each tier represents a time-frame. Four presentations in this session represent the missions in the first tier (2010-2013). These missions have now entered various stages of funding and development with NASA.

8:20
**WE1.210.1** **THE DECADAL SURVEY'S ICESAT-II MISSION: A FUNDAMENTAL TOOL FOR UNDERSTANDING THE EARTH'S RAPIDLY CHANGING ICE COVER**
*Waleed Abdalati, Peter Zwally, John Loiacono*

8:45
**WE1.210.2** **THE SOIL MOISTURE ACTIVE/PASSIVE MISSION (SMAP)**
*Dara Entekhabi, Eni Njoku, Peggy O'Neill, Thomas Jackson, Jared Entin, Eastwood Im*

9:10
**WE1.210.3** **DEFORMATION, ECOSYSTEM STRUCTURE, AND DYNAMICS OF ICE (DESDYNI)**
*Andrea Donnellan, Paul Rosen, Howard Zebker, Jon Ranson*

9:35
**WE1.210.4** **THE NRC DECADAL SURVEY CLIMATE ABSOLUTE RADIANCE AND REFRACTIVITY OBSERVATORY: NASA IMPLEMENTATION**
*Donald Anderson, Kenneth Jucks, David Young*



## WE1.101: Wednesday, July 9, 08:20 - 10:00

**WE1.101** **Near Sub-Surface Electromagnetic Imaging: Methods and Applications I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 101
Co-Chairs: Lorenzo Crocco and Amelie Litman

8:20
**WE1.101.1** **IMAGING SOIL INSIDE A CYLINDRICAL MICROWAVE SCANNER: FIRST RESULTS WITH PHANTOMS**
*Raphael Lencrerot, Amelie Litman, Jean-Michel Geffrin, Herve Tortel, Jamal Zbitou*

8:40
**WE1.101.2** **COMPRESSIVE SENSING AND SIGNAL SUBSPACE METHODS FOR INVERSE SCATTERING INCLUDING MULTIPLE SCATTERING**
*Edwin Marengo*

9:00
**WE1.101.3** **ACCURATE VECTOR-IMAGING OF GPR DATA BASED ON EXACT RADIATION PATTERNS**
*Jan van der Kruk, Rita Streich, Mark Grasmueck*

9:20
**WE1.101.4** **NONLINEAR INVERSION OF CROSS-WELL ELECTROMAGNETIC DATA IN METALLIC CASED WELLS**
*Jianguo Liu, Aria Abubakar, Tarek Habashy*

9:40
**WE1.101.5** **SPACE-FREQUENCY ULTRAWIDEBAND TIME-REVERSAL IMAGING METHOD AS APPLIED TO SUBSURFACE OBJECTS**
*Mehmet E. Yavuz, Fernando L. Teixeira*

## WE1.102: Wednesday, July 9, 08:20 - 10:00

**WE1.102** **SAR/PolSAR/InSAR for Environmental Monitoring I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 102
Co-Chairs: Kun-Shan Chen and Jong-Sen Lee

8:20
**WE1.102.1** **RECENT ADVANCES IN RP-POL-IN-SAR HAZARD MONITORING OF TECTONIC STRESS AND LAND-SLIDES**
*Wolfgang-Martin Boerner, Kun-Shan Chen*

8:40
**WE1.102.2** **A LAND-COVER MONITORING FOR VOLCANOES BY USING ALOS-PALSAR QUAD-POL. DATA**
*Yutaka Wada, Yoshio Yamaguchi, Hiroshi Ohkura, Motoo Ukawa*

9:00
**WE1.102.3** **RIVER ICE MAPPING FROM POLSAR IMAGES**
*Stephane Mermoz, Sophie Allain, Monique Bernier, Eric Pottier, Imen Gherboudj*

9:20
**WE1.102.4** **MAPPING SUBSIDENCE NEAR HAONI, VIETNAM FROM ENVISAT ASAR DATA**
*Chin-Fu Chao, Chih-Tien Wang, Kun-Shan Chen, Jun-Yee Yen, Jong-Sen Lee*

9:40
**WE1.102.5** **GB-SAR/PISAR SIMULTANEOUS EXPERIMENT FOR A TRIAL OF FLOOD AREA DETECTION**
*Manabu Watanabe, Masayoshi Matsumoto, Masanobu Shimada, Motoyuki Sato*

## WE1.103: Wednesday, July 9, 08:20 - 10:00

**WE1.103** **Active Microwave Remote Sensing of Terrestrial Snow I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 103
Co-Chairs: Martti Hallikainen and Jiancheng Shi

8:20
**WE1.103.1** **SCIENTIFIC PREPARATIONS FOR COREH20, A DUAL FREQUENCY SAR MISSION FOR SNOW AND ICE OBSERVATIONS**
*Helmut Rott, Donald Cline, Claude R. Duguay, Richard Essery, Christian Haas, Giovanni Macelloni, Eirik Malnes, Jouni Pulliainen, Helge Rebhan, Simon Yueh*

8:40
**WE1.103.2** **POLSCAT KU-BAND RADAR REMOTE SENSING OF TERRESTRIAL SNOW COVER**
*Simon Yueh, Donald Cline, Kelly Elder*

9:00
**WE1.103.3** **STUDIES OF MULTI-FREQUENCY POLARIMETRIC BACKSCATTERING CHARACTERISTICS OF SNOW COVER AND GLACIERS MEASURED IN THE HELISNOW-2008 CAMPAIGN**
*Helmut Rott, Thomas Nagler, Stefan Kern, Detlef Stammer, Helge Rebhan, Jiancheng Shi*

9:20
**WE1.103.4** **MODELING ACTIVE MICROWAVE REMOTE SENSING OF MULTILAYER DRY SNOW USING DENSE MEDIA RADIATIVE TRANSFER THEORY**
*Ding Liang, Leung Tsang, Simon Yueh*

9:40
**WE1.103.5** **DEVELOPMENT OF A PARAMETERIZED SNOW SCATTERING MODEL**
*Jinyang Du, Jiancheng Shi*

## WE1.104: Wednesday, July 9, 08:20 - 10:00

**WE1.104** **Soils and Hydrologic Applications**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 104
Co-Chairs: Rajat Bindish and Al Gasiewski

8:20
**WE1.104.1** **AIRBORNE SOIL MOISTURE MAPPING IN SUPPORT OF RELIEF EFFORTS IN TEXAS DURING FLOODING EVENTS OF 2007**
*Albin Gasiewski, Eric McIntyre, Damian Manda, Marian Klein, Gordon Wells, Teresa Howard, Jackson Thomas*

8:40
**WE1.104.2** **LANDSLIDE SUSCEPTIBILITY MAPPING USING REMOTELY SENSED SOIL MOISTURE**
*Ram Ray, Jennifer Jacobs*

9:00
**WE1.104.3** **A NEW APPROACH TO LIQUEFACTION POTENTIAL MAPPING USING SATELLITE REMOTE SENSING AND SUPPORT VECTOR MACHINE ALGORITHM**
*Thomas Oommen, Laurie Baise*

9:20
**WE1.104.4** **REMOTE SENSING RETRIEVAL OF SUBSTRATE BEARING STRENGTH FROM HYPERSPECTRAL IMAGERY AT THE VIRGINIA COAST RESERVE (VCR'07) MULTI-SENSOR CAMPAIGN**
*Charles Bachmann, C. Reid Nichols, Marcos Montes, Rong-Rong Li, Patrick Woodward, Robert Fusina, Wei Chen, Melba Crawford, Vimal Mishra, Wonkook Kim, James Monty, Kevin McIlhany, Ken Kessler, Daniel Korwan, David Miller, Ellen Bennert, Geoff Smith, David Gillis, Jon Sellars, Christopher Parrish, Art Schwarzschild, Barry Truitt*

9:40
**WE1.104.5** **RADIOMETRIC MEASUREMENTS OF MAXIMUM BOUND WATER FRACTION IN SOIL**
*Valery Mironov, Pavel Bobrov, Alexander Yaschenko*

Wednesday

## WE1.105: Wednesday, July 9, 08:20 - 10:00

**WE1.105** **Ocean Altimetry**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 105
Co-Chairs: Calvin Teague and Roland Romeiser

8:20
**WE1.105.1** **STATISTICAL CHARACTERISTICS OF GLOBAL OCEAN SURFACE CIRCULATIONS FROM SATELLITE ALTIMETRY**
*Peter C. Chu*

8:40
**WE1.105.2** **PARIS ALTIMETRY PRECISION PREDICTION WITH GALILEO SIGNALS-IN-SPACE**
*Salvatore D'Addio, Christopher Buck, Manuel Martín-Neira*

9:00
**WE1.105.3** **ALTIKA INSTRUMENT FOR SPACE ALTIMETRY WITH IMPROVED PERFORMANCES AND OCEAN SAMPLING : INSTRUMENT DEVELOPMENT STATUS AND FIRST TEST RESULTS**
*Jacques Richard, Benoît Durand, Frédéric Robert, Nicolas Taveneau, Nathalie Steunou, Pierre Sengenes*

9:20
**WE1.105.4** **SPACE ALTIMETRY FROM NANO-SATELLITES : PAYLOAD FEASIBILITY, MISSIONS AND SYSTEM PERFORMANCES**
*Jacques Richard, Juliette Vallon, Philippe Escudier*

9:40
**WE1.105.5** **CLASSIFICATION OF ALTIMETRIC SIGNALS USING LINEAR DISCRIMINANT ANALYSIS**
*Jean-Yves Tourneret, Corinne Mailhes, Laiba Amarouche, Nathalie Steunou*

## WE1.107: Wednesday, July 9, 08:20 - 10:00

**WE1.107** **Multi- and Hyperspectral Image Processing II**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 107
Co-Chairs: Lorenzo Bruzzone and Jocelyn Chanussot

8:20
**WE1.107.1** **WAVELET-BASED MULTISPECTRAL IMAGE RESTORATION**
*Arno Duijster, Steve De Backer, Paul Scheunders*

8:40
**WE1.107.2** **NOISE REDUCTION OF HYPERSPECTRAL REMOTELY SENSED IMAGERY: A NONLINEAR DYNAMICAL SYSTEM APPROACH**
*Tian Han, David G. Goodenough*

9:00
**WE1.107.3** **COMPARING SAMPLING METHODS IN FASTER COMPUTATION OF NON-NEGATIVE TENSOR FACTORIZATION OF SPECTRAL IMAGES**
*Arto Kaarna, Alexey Andriyashin*

9:20
**WE1.107.4** **PRINCIPAL COMPONENT ANALYSIS IN MULTIPLE DESCRIPTION CODING OF SPECTRAL IMAGES**
*Arto Kaarna, Andrey Norkin, Jaakko Astola*

9:40
**WE1.107.5** **A NOVEL TECHNIQUE FOR HYPERSPECTRAL SIGNAL SUBSPACE ESTIMATION IN TARGET DETECTION APPLICATIONS**
*Nicola Acito, Giovanni Corsini, Marco Diani, Stefania Matteoli, Salvatore Resta*

## WE1.108: Wednesday, July 9, 08:20 - 10:00

**WE1.108** **TerraSAR-X & TanDEM-X: Features & Calibration**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 108
Co-Chairs: Josef Mittermayer and Gerhard Krieger

8:20
**WE1.108.1** **TERRASAR-X A COMPLEX IMAGE APPROACH FOR FEATURE EXTRACTION AND MODELING**
*Matteo Soccorsi, Mihai Datcu*

8:40
**WE1.108.2** **AUTOMATIC EXTRACTION OF WATER BODIES FROM TERRASAR-X DATA**
*Thomas Hahmann, Achim Roth, Martin Habermeyer*

9:00
**WE1.108.3** **DETERMINING THE OPTIMUM COMPROMISE BETWEEN SAR DATA COMPRESSION AND RADIOMETRIC PERFORMANCE –AN APPROACH BASED ON THE ANALYSIS OF TERRASAR-X DATA–**
*Marwan Younis, Johannes Böer, Carlos Ortega, Daniel Schulze, Sigurd Huber, Josef Mittermayer*

9:20
**WE1.108.4** **TANDEM-X: DEM CALIBRATION CONCEPT**
*Birgit Wessel, Astrid Gruber, Markus Bachmann, Jaime Hueso, Martin Huber, Detlev Kosmann, Achim Roth*

9:40
**WE1.108.5** **TANDEM-X DEM CALIBRATION AND PROCESSING EXPERIMENTS WITH E-SAR**
*Jaime Hueso Gonzalez, Markus Bachmann, Christian Andres, Gerhard Krieger, Rolf Scheiber*

## WE1.109: Wednesday, July 9, 08:20 - 10:00

**WE1.109** **Atmospheric Compensation Techniques for Imaging Spectrometer Data I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 109
Co-Chairs: Thomas Cooley and Gail Anderson

8:20
**WE1.109.1** **GLOBAL DAILY ATMOSPHERIC STATE PROFILES FROM THE ATMOSPHERIC INFRARED SOUNDER**
*Thomas Pagano, Hartmut Aumann, Eric Fetzer, Bill Irion, Bjorn H. Lambrigtsen, Mous Chahine*

8:40
**WE1.109.2** **ON THE PERFORMANCE OF THE OSS RADIATIVE TRANSFER METHOD IN APPLICATION TO REAL-TIME ATMOSPHERE CHARACTERIZATION FROM STALLITE SOUNDING AND IMAGING DATA**
*Jean-Luc Moncet, Gennady Uymin, Alan Lipton, Robert d'Entremont*

9:00
**WE1.109.3** **IMPACT OF MODTRAN™5.1 ON ATMOSPHERIC COMPENSATION**
*Alexander Berk, Gail P. Anderson*

9:20
**WE1.109.4** **ATMOSPHERIC CORRECTION IN THE SOLAR SPECTRUM: METHODS AND VALIDATION.**
*Eric Vermote*

9:40
**WE1.109.5** **IMPROVEMENTS IN AEROSOL RETRIEVAL FOR ATMOSPHERIC CORRECTION**
*Steven Adler-Golden, Michael Matthew, Alexander Berk, Marsha Fox, Jamine Lee, Anthony Ratkowski*



## WE1.110: Wednesday, July 9, 08:20 - 10:00

**WE1.110** **Land Cover Classification**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 110
Co-Chairs: Alan J. Stern and Marc Simard

8:20
**WE1.110.1** **SEGMENTATION OF ALOS PALSAR IMAGES FOR MAPPING OF CLEAR-CUTS**
*Klas Folkesson, Leif E. B. Eriksson, Gustaf Sandberg, Lars M. H. Ulander*

8:40
**WE1.110.2** **AUTOMATIC FOREST SPECIES CLASSIFICATION USING COMBINED LIDAR DATA AND OPTICAL IMAGERY**
*Wen Zhang, Baoxin Hu, Linhai Jing, Murray Woods, Paul Courville*

9:00
**WE1.110.3** **DETECTING URBAN VEGETATION USING A OBJECT-ORIENTED METHOD WITH QUICKBIRD IMAGERY**
*Chang-Qing Ke, Guo-Dong Tang, Xue Cao*

9:20
**WE1.110.4** **COMPARISON OF WINTER WHEAT CLASSIFICATION USING MULTI-TEMPORAL IRS-P6 IMAGES**
*Yanfei Lei, Wenquan Zhu, Yaozhong Pan, Chao Xu*

9:40
**WE1.110.5** **ESTIMATION OF DIRECTIONAL VEGETATION FRACTION COVER FROM TOA SPECTRAL DATA OF AATSR**
*Yu-Li Shi, Guang-Jian Yan, Zhao-Liang Li*

## WE1.111: Wednesday, July 9, 08:20 - 10:00

**WE1.111** **Change Detection**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 111
Co-Chairs: Sebastiano Serpico and Gustavo Camps-Valls

8:20
**WE1.111.1** **A CONTEXT-SENSITIVE TECHNIQUE ROBUST TO REGISTRATION NOISE FOR CHANGE DETECTION IN VERY HIGH RESOLUTION MULTISPECTRAL IMAGES**
*Francesca Bovolo, Lorenzo Bruzzone, Silvia Marchesi*

8:40
**WE1.111.2** **CHANGE DETECTION WITH MISS-REGISTRATION ERRORS**
*Gregoire Mercier, Jordi Inglada*

9:00
**WE1.111.3** **AN ADAPTIVE TECHNIQUE BASED ON SIMILARITY MEASURES FOR CHANGE DETECTION IN VERY HIGH RESOLUTION SAR IMAGES**
*Francesca Bovolo, Lorenzo Bruzzone*

9:20
**WE1.111.4** **A NEW ADDITIVE KERNEL FOR CHANGE DETECTION IN REMOTE SENSING IMAGERY USING SVM**
*Tarek Habib, Jordi Inglada, Gregoire Mercier, Jocelyn Chanussot*

9:40
**WE1.111.5** **A DCT-BASED CHANGE DETECTION METHOD FOR MULTI-TEMPORAL SAR IMAGES**
*Hongtao Yu, Zhiping Lin, Geok Ling Chai, Chye Hwang Yan, Nalliah Raman*

## WE1.203: Wednesday, July 9, 08:20 - 10:00

**WE1.203** **Atmospheric Profiling I**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 08:20 - 10:00
Place: Room 203
Co-Chairs: David Kunkee and Chinnawat Surussavadee

8:20
**WE1.203.1** **NEURAL NETWORK ALGORITHMS FOR TROPOSPHERIC OZONE RETRIEVAL FROM ESA-ENVISAT SCIAMACHY AND NASA-AURA OMI SATELLITE DATA**
*Pasquale Sellitto, Fabio Del Frate, Domenico Solimini*

8:40
**WE1.203.2** **JOINT TEMPERATURE AND NITROGEN DIOXIDE VERTICAL PROFILES FROM UV/VIS SATELLITE DATA FOR AIR POLLUTION MONITORING FROM SPACE**
*Pasquale Sellitto, Fabio Del Frate, Domenico Solimini*

9:00
**WE1.203.3** **COMBINING CALIPSO AND METEOSAT IMAGES TO STUDY THE DISTRIBUTION OF ATMOSPHERIC DUST**
*Ben Wiltshire, Rajesh Govindan, Ivan Astin, Adrian Evans*

9:20
**WE1.203.4** **MULTI-DOPPLER MEASUREMENTS OF ATMOSPHERIC ROTORS AND TURBULENT MOUNTAIN WAVES**
*Samuel Haimov, Vanda Grubisic, Jeffrey French, Larry Oolman*

9:40
**WE1.203.5** **THE TIME SERIES OF TERRA AND AQUA MODIS NEAR-IR WATER VAPOR PRODUCTS**
*Bo-Cai Gao, Rong-Rong Li*

## WE2.101: Wednesday, July 9, 10:20 - 12:00

**WE2.101** **Near Sub-Surface Electromagnetic Imaging: Methods and Applications II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 101
Co-Chairs: Lorenzo Crocco and Amelie Litman

10:20
**WE2.101.1** **NEAR SURFACE FEATURES BY TDEM IMAGING**
*Alberto Godio, Gaetano Ranieri*

10:40
**WE2.101.2** **LINEAR INVERSIONS OF PEC SCATTERERS**
*Adriana Brancaccio, Colomba Di Dio, Giovanni Leone*

11:00
**WE2.101.3** **MULTI-FREQUENCY INVERSION ALGORITHM FOR THE RETRIEVAL OF SUBSURFACE PROPERTIES OF LAYERED SOIL MEDIA FROM VHF/UHF RADAR MEASUREMENTS**
*Chih Kuo, Mahta Moghaddam*

11:20
**WE2.101.4** **MICROWAVE TOMOGRAPHY BASED CHARACTERIZATION OF BURIED PLASTIC PIPE FILLED WITH DIFFERENT FLUIDS: AN EXPERIMENTAL STUDY**
*Francesco Soldovieri, Lorenzo Crocco, Elena Pettinelli, David Redman, Peter Annan*

11:40
**WE2.101.5** **UNDERSTANDING THE DISTRIBUTION OF GROUNDWATER RESOURCES USING SYNTHETIC APERTURE RADAR DATA OVER SOUTHWEST EGYPT**
*Cordula Robinson*



## WE2.102: Wednesday, July 9, 10:20 - 12:00

**WE2.102** **SAR/PolSAR/InSAR for Environmental Monitoring I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 102
Co-Chairs: Jong-Sen Lee and Kun-Shan Chen

10:20
**WE2.102.1** **INSAR MONITORING OF LANDSLIDES IN CANADA.**
*Vern Singhroy, Pierre-Jean Alasset, Valentin Poncos, Rejean Couture*

10:40
**WE2.102.2** **A COMBINED SMALL BASELINE AND PERSISTENT SCATTERER INSAR METHOD FOR RESOLVING LAND DEFORMATION IN NATURAL TERRAIN**
*Tom R. Lauknes, Piyush Shanker A., Howard Zebker, Yngvar Larsen*

11:00
**WE2.102.3** **DUAL POLARIZATION DETECTION OF SHIPS AND ICEBERGS – RECENT RESULTS WITH ENVISAT ASAR AND DATA SIMULATIONS OF RADARSAT-2**
*Carl Howell, Desmond Power, Michael Lynch, Kelley Dodge, Pradeep Bobby, Charles Randell, Paris Vachon, Gordon Staples*

11:20
**WE2.102.4** **A REAL-APERTURE RADAR FOR GROUND-BASED DIFFERENTIAL INTERFEROMETRY**
*Charles Werner, Tazio Strozzi, Andreas Wiesmann, Urs Wegmüller*

11:40
**WE2.102.5** **DAILY OIL POLLUTION MONITORING WITH RADARSAT-2 SCANSAR – FIRST IMPRESSIONS**
*Roger De Abreu, Laurie Weir, Dean Flett, Paris Vachon*

## WE2.103: Wednesday, July 9, 10:20 - 12:00

**WE2.103** **Active Microwave Remote Sensing of Terrestrial Snow II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 103
Co-Chairs: Jiancheng Shi and Martti Hallikainen

10:20
**WE2.103.1** **ACTIVE AND PASSIVE MICROWAVE REMOTE SENSING OF SNOW AT LARGE SPATIAL SCALES**
*Marco Tedesco*

10:40
**WE2.103.2** **DEVELOPMENT OF SAR DATA-BASED SNOW-COVERED AREA ESTIMATION METHOD FOR BOREAL FOREST ZONE**
*Kari Luojus, Jouni Pulliainen, Sari Metsämäki, Guifre Molera, Risto Nakari, Juha-Petri Kärnä, Martti Hallikainen*

11:00
**WE2.103.3** **PRELIMINARY POLARIMETRIC MEASUREMENTS OF SNOW MICROWAVE REFLECTIVE AND EMISSIVE CHARACTERISTICS ANGULAR DEPENDENCES AT 15GHZ**
*Astghik Hambaryan, Artashes Arakelyan, Arsen Arakelyan, Sargis Darbinyan, Melanya Grigoryan, Izabela Hakobyan, Vardan Hambaryan, Vanik Karyan, Mushegh Manukyan, Gagik Hovhannisyan*

11:20
**WE2.103.4** **IMPACT OF VEGETATION IN THE RETRIEVAL OF SNOW PARAMETERS FROM BACKSCATTERING MEASUREMENTS AT THE X- AND KU-BANDS**
*Giovanni Macelloni, Simone Pettinato, Emanuele Santi, Helmut Rott, Donald Cline, Helge Rebhan*

11:40
**WE2.103.5** **AIRBORNE MEASUREMENT OF SNOW THICKNESS OVER SEA ICE**
*Unquiea Wade*

## WE2.104: Wednesday, July 9, 10:20 - 12:00

**WE2.104** **Scaling Issues in Remote Sensing of Soil Moisture**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 104
Co-Chairs: Jasmeet Judge and Wade Crow

10:20
**WE2.104.1** **ON THE DISAGGREGATION OF PASSIVE MICROWAVE SOIL MOISTURE DATA USING A PRIORI KNOWLEDGE OF TEMPORALLY PERSISTENT SOIL MOISTURE FIELDS**
*Alexander Loew, Wolfram Mauser*

10:40
**WE2.104.2** **APPLICATION OF A BAYESIAN APPROACH FOR DOWNSCALING OF SMOS OBSERVATIONS**
*Rocco Panciera, Jeffrey Walker, Edward Kim, Iliana Mladenova*

11:00
**WE2.104.3** **DOWNSCALING OF GLOBAL SOIL MOISTURE USING AUXILIARY DATA**
*Genong Yu, Liping Di, Wenli Yang*

11:20
**WE2.104.4** **INFLUENCE OF FOREST COVER ON L-BAND SOIL MOISTURE RETRIEVAL FROM HETEROGENEOUS PIXELS**
*Jennifer Grant, Jean-Pierre Wigneron, Rocco Panciera, Kauzar Saleh, Jeffrey Walker, Adriaan Van de Griend*

11:40
**WE2.104.5** **SURFACE HETEROGENEITY ISSUES IN REMOTE SENSING OF SOIL MOISTURE**
*William Crosson, Ashutosh Limaye, Charles Laymon*

## WE2.105: Wednesday, July 9, 10:20 - 12:00

**WE2.105** **Ocean and Ice Altimetry**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 105
Co-Chairs: Timothy Urban and Cristina Martin-Puig

10:20
**WE2.105.1** **ANALYSIS OF ICESAT LASER ALTIMETRY ELEVATIONS OVER OCEAN SURFACES: SEA STATE AND CLOUD EFFECTS**
*Timothy Urban, Roberto Gutierrez, Bob Schutz*

10:40
**WE2.105.2** **BAYESIAN ESTIMATION OF ALTIMETER ECHO PARAMETERS**
*Jerome Severini, Corinne Mailhes, Pierre Thibaut, Jean-Yves Tourneret*

11:00
**WE2.105.3** **NEW THEORETICAL MODEL OF SAR ALTIMETER SIGNAL OVER WATER SURFACES**
*Cristina Martin-Puig, Jose Marquez, Giulio Ruffini, David Cotton, Christine Gommenginger, Peter Challenor, R. Keith Raney, Jérôme Benveniste*

11:20
**WE2.105.4** **INTERMITTENCY IN THE EAST MADAGASCAR FLOW**
*Graham Quartly*

11:40
**WE2.105.5** **LINKING SURFACE AND SUB-SURFACE VARIABILITY IN DRAKE PASSAGE**
*Graham Quartly, Jesus Gómez-Enri, Gabriel Navarro*



## WE2.107: Wednesday, July 9, 10:20 - 12:00

**WE2.107** **Multi- and Hyperspectral Image Processing III**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 107
Co-Chairs: Antonio Plaza and Jose Bioucas

10:20
**WE2.107.1** **MINIMUM VOLUME SIMPLEX ANALYSIS: A FAST ALGORITHM TO UNMIX HYPERSPECTRAL DATA**
*Jun Li, Jose Manuel Bioucas Dias*

10:40
**WE2.107.2** **AUTOMATIC APPROACHES TO ON-LAND/ON-BOARD FILTERING AND LOSSY COMPRESSION OF AVIRIS IMAGES**
*Nikolay Ponomarenko, Vladimir Lukin, Mikhail Zriakhov, Arto Kaarna, Jaakko Astola*

11:00
**WE2.107.3** **A NEW LINEAR MIXTURE MODEL FOR HYPERSPECTRAL IMAGE ANALYSIS**
*Nareenart Raksuntorn, Qian Du*

11:20
**WE2.107.4** **HYPERSPECTRAL CLASSIFICATION FUSION FOR CLASSIFYING DIFFERENT MILITARY TARGETS**
*George Lampropoulos, Ting Liu, Shen-En Qian, Chuhong Fei*

11:40
**WE2.107.5** **DESTRIPING MODIS DATA BASED ON SURFACE SPECTRAL CORRELATION**
*Zifeng Wang, Liangfu Chen, Xingfa Gu, Tao Yu*

## WE2.108: Wednesday, July 9, 10:20 - 12:00

**WE2.108** **Multi Aperture Multistatic SAR**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 108
Co-Chairs: Tom Lukowski and Martina Gabele

10:20
**WE2.108.1** **MULTISTATIC SCENARIOS FOR A GPS SAR SYSTEM**
*Frédéric Maussang, Franck Daout, Guillaume Ginolhac, Françoise Schmitt*

10:40
**WE2.108.2** **REFLECTIVITY AND DEM ESTIMATION FROM MULTI-BASELINE COMPLEX SAR SIGNALS**
*Annarita Evangelista, Federica Meglio, Gilda Schirinzi*

11:00
**WE2.108.3** **SMART MULTI-APERTURE RADAR TECHNIQUES FOR SPACEBORNE REMOTE SENSING**
*Marwan Younis, Federica Bordoni, Nico Gebert, Gerhard Krieger*

11:20
**WE2.108.4** **GMTI PERFORMANCE OF A HIGH RESOLUTION WIDE SWATH SAR OPERATION MODE**
*Martina Gabele, Gerhard Krieger*

11:40
**WE2.108.5** **GROUND MOVING TARGETS DETECTION AND PARAMETER ESTIMATION FOR MULTI-CHANNEL SAR SYSTEM**
*Shengqi Zhu, Guisheng Liao, Yi Qu, Zhengguang Zhou*

## WE2.109: Wednesday, July 9, 10:20 - 12:00

**WE2.109** **Atmospheric Compensation Techniques for Imaging Spectrometer Data II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 109
Co-Chairs: Thomas Cooley and Gail Anderson

10:20
**WE2.109.1** **ADVANCES IN QUANTIFYING THE SPECTRAL RADIATIVE PROPERTIES OF CLOUDS AND AEROSOLS FROM AIRBORNE FIELD STUDIES**
*Peter Pilewskie, Sebastian Schmidt, Odele Coddington, Bruce Kindel, Patrick McBride*

10:40
**WE2.109.2** **RADIATIVE IMPACT OF BOREAL SMOKE AND ASIAN DUST IN THE ARCTIC: OBSERVED VERSUS MODELED**
*Robert S. Stone, Gail P. Anderson, Eric Shettle, Konstantin Loukachine, Elizabeth Andrews, Ellwsorth G. Dutton, Crystal Barker Schaaf, Miguel O. Román III, Alexander Berk*

11:00
**WE2.109.3** **A NEW METHOD FOR TEMPERATURE/EMISSIVITY SEPARATION FROM HYPERSPECTRAL THERMAL INFRARED DATA**
*Xinhong Wang, XiaoYing OuYang, Zhao-Liang Li, Renhuang Zhang*

11:20
**WE2.109.4** **A GENERIC FLIGHT INTERFEROMETER FOR ATMOSPHERIC SOUNDING FROM GEO ORBIT.**
*Frederic Grandmont, Jacques Giroux, Marc-Andre Soucy, Henry Buijs*

11:40
**WE2.109.5** **COMPARISON OF SPLIT-WINDOW AND SINGLE-CHANNEL METHODS FOR LAND SURFACE TEMPERATURE RETRIEVAL FROM MODIS AND AATSR DATA**
*Joan M. Galve, César Coll, Vicente Caselles, Enric Valor, María Mira*

## WE2.110: Wednesday, July 9, 10:20 - 12:00

**WE2.110** **Forest Structure and Biomass**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 110
Co-Chairs: Wenge Ni-Meister and Konstantine Papathanassiou

10:20
**WE2.110.1** **MAPPING TROPICAL AFRICA ABOVE-GROUND BIOMASS USING SATELLITE DATA**
*Alessandro Baccini, Nadine T. Laporte, Scott Goetz, Mindy Sun*

10:40
**WE2.110.2** **MAPPING ABOVEGROUND FOREST BIOMASS FROM IKONOS HIGH RESOLUTION SATELLITE IMAGE AND MULTI-SOURCE GEOSPATIAL DATA USING NEURAL NETWORKS AND KRIGING INTERPOLATION**
*Lacina Coulibaly, Pierre Migolet, Hector Guy Adegbidi, Richard Fournier, Eric Hervet*

11:00
**WE2.110.3** **POLINSAR FOR FOREST BIOMASS RETRIEVAL: PALSAR OBSERVATIONS AND MODEL ANALYSIS**
*Marco Lavalle, Domenico Solimini, Eric Pottier*

11:20
**WE2.110.4** **EXTRACTING SAVANNA TREE STRUCTURE PARAMETERS FROM MULTIANGULAR REMOTE SENSING**
*Martin Beland, Richard Fournier*

11:40
**WE2.110.5** **COMBINING ABOVE-CANOPY DOWNWARD-LOOKING AND BELOW-CANOPY UPWARD HEMISPHERICAL-SCANNING LIDAR FOR IMPROVED ABOVE-GROUND BIOMASS RETRIEVAL**
*Wenge Ni-Meister, Shihyan Lee, Alan Strahler, Curtis E. Woodcock, David L. B. Jupp, Guoqing Sun, Jon Ranson, J. Bryan Blair, Michelle Hofton*



## WE2.111: Wednesday, July 9, 10:20 - 12:00

**WE2.111** **Analysis Techniques: Land Use / Land Cover**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 111
Co-Chairs: Lori Mann Bruce and James Tilton

10:20
**WE2.111.1** **TREE DENSITY DETECTION USING SPECTRAL UNMIXING WITHOUT KNOWN TARGET SPECTRA**
*Matthias Schramm, Tobias Landmann*

10:40
**WE2.111.2** **SATELLITE DATA FUSION TECHNIQUES FOR TERRAIN AND SURFICIAL GEOLOGICAL MAPPING**
*Goran Pavlic, Vern Singhroy, Alejandra Duk-Rodkin*

11:00
**WE2.111.3** **APPLYING SMOOTHING CURVES TO AVHRR AND MODIS SATELLITE IMAGERY TO DETECT THE ONSET OF SPRING IN THE MIDWEST AND NORTHEAST UNITED STATES**
*Jonathan Hanes*

11:20
**WE2.111.4** **AN EVALUATION OF ECOTOPE CLASSIFICATION USING SUPERRESOLUTION IMAGES DERIVED FROM CHRIS/PROBA DATA**
*Jonathan Cheung-Wai Chan, Jianglin Ma, Pieter Kempeneers, Frank Canters, Jeroen Vandenborre, Desiré Paelinckx*

11:40
**WE2.111.5** **MORPHOLOGICAL SEGMENTATION OF MULTISPECTRAL IMAGES FOR LAND COVER MAPPING**
*Mohamed Sellami, Ferdaous Chaabane, Catalin Fetita*

## WE2.203: Wednesday, July 9, 10:20 - 12:00

**WE2.203** **Atmospheric Profiling II**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 203
Co-Chairs: David Kunkee and Chinnawat Surussavadee

10:20
**WE2.203.1** **THE U.S. DEPARTMENT OF ENERGY'S ATMOSPHERIC RADIATION MEASUREMENT CLIMATE RESEARCH FACILITIES ON THE NORTH SLOPE OF ALASKA**
*Mark Ivey, Hans Verlinde, Bernard Zak, Jeffrey Zirzow*

10:40
**WE2.203.2** **WATER VAPOR AND LIQUID WATER PATH RETRIEVALS FROM MICROWAVE, MILLIMETER WAVELENGTH, AND INFRARED RADIOMETERS DURING RHUBC**
*Ed R. Westwater, Domenico Cimini, Vinia Mattioli, Dave Turner, Albin Gasiewski, Marian Klein, Vladimir Leuski*

11:00
**WE2.203.3** **A SEMI-DECADAL MULTI-SENSOR GRIDDED DATA RECORD OF OUTGOING LONGWAVE RADIATION (OLR) FROM AQUA M. HALEM, D. CHAPMAN, P. NGUYEN UNIVERSITY OF MARYLAND, BALTIMORE COUNTY HALEM@UMBC.EDU**
*Milton Halem, David Chapman, Phuong Nguyen*

11:20
**WE2.203.4** **A BASELINE FOR THE DECADAL-SURVEY PATH MISSION**
*Bjorn H. Lambrigtsen, Alan Tanner, Todd Gaier, Pekka Kangaslahti*

11:40
**WE2.203.5** **APPLICATION OF AMSR-E DATA TO STUDY INTEGRATED ATMOSPHERIC PARAMETERS OVER THE POLAR OCEAN USING NEURAL NETWORKS-BASED ALGORITHMS**
*Elizaveta Zabolotskikh, Leonid Mitnik, Leonid Bobylev*

## WE2.210: Wednesday, July 9, 10:20 - 12:00

**WE2.210** **Observation Technologies For The Next Generation In Geoscience I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 10:20 - 12:00
Place: Room 210
Co-Chairs: Mariann Albjerg and Glenn Prescott

10:20
**WE2.210.1** **INVESTMENTS IN REMOTE SENSING INSTRUMENT TECHNOLOGIES**
*Janice Buckner*

10:40
**WE2.210.2** **PATHFINDER ADVANCED RADAR ICE SOUNDER: PARIS**
*R. Keith Raney, Carl Leuschen, Marshall Jose*

11:00
**WE2.210.3** **A MULTI-FUNCTIONAL FIBER LASER LIDAR FOR GEO-SCIENCE.**
*Michael Dobbs, William Krabill, Mike Cisewski, Wallace Harrison, C. K. Shum, Doug McGregor, Mark Neal, Sheldon Stokes*

11:20
**WE2.210.4** **HIGH-ALTITUDE IMAGING WIND AND RAIN AIRBORNE RADAR (HIWRAP)**
*Lihua Li, Gerald Heymsfield, James Carswell, Dan Schaubert, Justin Creticos, Manuel Vega*

11:40
**WE2.210.5** **PASSIVE A-BAND WIND SOUNDER(PAWS)FOR MEASURING TROPOSPHERIC WIND VELOCITY**
*Robert Pierce, Shane Roark, Christian Grund, Philip Slyamaker, Pei Huang, Paul Kaptchen*

## WE3.101: Wednesday, July 9, 13:20 - 15:00

**WE3.101** **Geological Applications of Hyper- and Multi-spectral Imaging**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 101
Co-Chairs: James Taranik and James Theiler

13:20
**WE3.101.1** **XRD AND INFRARED SPECTROSCOPIC VALIDATION OF WEATHERING SURFACES FROM ULTRAMAFIC AND MAFIC LITHOLOGIES EXAMINED USING HYPERSPECTRAL IMAGERY, CROSS LAKE AREA, CAPE SMITH BELT, NORTHERN QUEBEC, CANADA**
*Lori Wickert, Jeanne Percival, William Morris, Jeff Harris*

13:40
**WE3.101.2** **THE USE OF HIGH SPATIAL AND SPECTRAL RESOLUTION AIRBORNE IMAGERY FOR ALTERATION MAPPING AND WASTE CHARACTERIZATION AT THE COMSTOCK LODE, NEVADA**
*David Coulter, Phoebe Hauff, William Peppin*

14:00
**WE3.101.3** **MAPPING ROCK-FORMING MINERALS AT DAYLIGHT PASS, DEATH VALLEY NATIONAL PARK, CALIFORNIA USING SEBASS THERMAL-INFRARED HYPERSPECTRAL IMAGE DATA**
*Zan Aslett, James Taranik, Dean Riley*

14:20
**WE3.101.4** **MODIS BORNE ANALYSIS OF LONG SERIES OF RADIANT FLUXES AT ACTIVE LAVA LAKES**
*Barbara R. Hirn, Concettina Di Bartola, Francesca Ferro, Fabrizio Ferrucci*

14:40
**WE3.101.5** **SEVIRI ONBOARD METEOSAT SECOND GENERATION, AND THE QUANTITATIVE MONITORING OF EFFUSIVE VOLCANOES IN EUROPE AND AFRICA**
*Barbara R. Hirn, Concettina Di Bartola, Giovanni Laneve, Enrico Cadau, Fabrizio Ferrucci*



## WE3.102: Wednesday, July 9, 13:20 - 15:00

**WE3.102** **PolSAR and Pol-InSAR for Agricultural Information Product Development I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 102
Co-Chairs: Irena Hajnsek and Eric Gauthier

13:20
**WE3.102.1** **CONTRIBUTION OF MULTI-FREQUENCY, MULTI-SENSOR, AND MULTI-TEMPORAL RADAR DATA TO OPERATIONAL ANNUAL CROP MAPPING**
*Jiali Shang, Heather McNairn, Catherine Champagne, Xianfeng Jiao*

13:40
**WE3.102.2** **A NEW APPROACH FOR MAPPING FROZEN SOIL OF AGRICULTURAL LAND UNDER SNOW COVER USING RADARSAT-1**
*Jalal Khaldoune, Eric van Bochove, Monique Bernier, Michel C. Nolin*

14:00
**WE3.102.3** **SIMULTANEOUS FIELD EXPERIMENTS WITH PALSAR OBSERVATIONS FOR SOIL MOISTURE ESTIMATION**
*Manabu Watanabe, Gaku Kadosaki, Masami Fukuda, Motoyuki Sato*

14:20
**WE3.102.4** **ANALYSIS AND SURFACE PARAMETER RETRIEVAL FROM MULTITEMPORAL AIRBORNE AND SATELLITE DATA DURING AGRISAR 2006**
*Alexander Loew, Sebastian Osenstetter*

14:40
**WE3.102.5** **ANALYSIS OF POLARIMETRIC SURFACE SCATTERING IN HIGH RESOLUTION SAR**
*Sang-Eun Park, Laurent Ferro-Famil, Sophie Allain, Eric Pottier*

## WE3.103: Wednesday, July 9, 13:20 - 15:00

**WE3.103** **Passive Microwave Remote Sensing of Terrestrial Snow I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 103
Co-Chairs: Leung Tsang and Paolo Pampaloni

13:20
**WE3.103.1** **ESTIMATING SNOW PARAMETERS WITH MULTIFREQUENCY MICROWAVE RADIOMETRY**
*Marco Brogioni, Giovanni Macelloni, Enrico Palchetti, Simonetta Paloscia, Paolo Pampaloni, Simone Pettinato, Emanuele Santi, Anselmo Cagnati, Andrea Crepaz*

13:40
**WE3.103.2** **RESULTS FROM MICROWAVE RADIOMETER CAMPAIGN OF SEASONAL SNOW AND COMPARISON WITH EMISSION MODELS**
*Martti Hallikainen, Panu Lahtinen, Timo Piepponen, Lauri Honkavaara, Aleksis Schäfer*

14:00
**WE3.103.3** **ESTIMATION OF WET SNOW AND SNOW MELT IN EURASIA FROM 1979 TO 2007**
*Matias Takala, Jouni Pulliainen, Jarkko Koskinen, Kari Luojus*

14:20
**WE3.103.4** **MICROWAVE RADIOMETER DATA-DERIVED SNOW COVER OF NORTHERN EURASIA FOR CLIMATE MODEL VALIDATION**
*Jouni Pulliainen, Jarkko Koskinen, Matias Takala, Panu Lahtinen, Anna Kontu, Heikki Järvinen, Juha-Petri Kärnä, Kirsti Jylhä, Anna Parvio, Kari Luojus*

14:40
**WE3.103.5** **A RADIANCE BASED ASSIMILATION FRAMEWORK FOR THE RETRIEVAL OF SWE AND SNOW DEPTH FROM AMSR-E AND SSM/I DATA**
*Marco Tedesco, Alexander Loew, Thorsten Markus, Rolf Reichle*



## WE3.104: Wednesday, July 9, 13:20 - 15:00

**WE3.104** **Multiscale Processing**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 104
Co-Chairs: Catherine Ottle and Tyler Erickson

13:20
**WE3.104.1** **SUBPIXEL TEMPERATURE ESTIMATION FROM LOW RESOLUTION THERMAL INFRARED REMOTE SENSING**
*Catherine Ottlé, Abdelaziz Kallel, Guillaume Monteil, Sylvie Le Hégarat, Benoit Coudert*

13:40
**WE3.104.2** **RESEARCH ON THE SCALE EFFECT OF THE EVAPOTRANSPIRATION RETRIEVED BY SATELLITE SENSORS**
*Yani Liu, Xiaozhou Xin, Qinhuo Liu*

14:00
**WE3.104.3** **IMPROVING THE SPATIAL RESOLUTION OF SYNTHETIC APERTURE RADIOMETER IMAGERY USING AUXILIARY INFORMATION: APPLICATION TO THE SMOS MISSION**
*Adriano Camps, Mercè Vall-llossera, Maria Piles, Francesc Torres, Ignasi Corbella, Nuria Duffo*

14:20
**WE3.104.4** **A GEOSTATISTICAL INVERSE MODELING APPROACH FOR PRODUCING EARTH SURFACE ESTIMATES FROM MULTIPLE REMOTELY SENSED DATASETS**
*Tyler Erickson, Brian Thelen*

14:40
**WE3.104.5** **MONOTONICITY OF AREA AVERAGED NDVI AS A FUNCTION OF SPATIAL RESOLUTION BASED ON A VARIABLE ENDMEMBER LINEAR MIXTURE MODEL**
*Hiroki Yoshioka, Takahiro Wada, Kenta Obata, Tomoaki Miura*

## WE3.105: Wednesday, July 9, 13:20 - 15:00

**WE3.105** **Coastal Altimetry I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 105
Co-Chairs: William Emery and Paolo Cipollini

13:20
**WE3.105.1** **REPROCESSING ALTIMETER DATA RECORDS ALONG EUROPEAN COASTS: LESSONS LEARNED FROM THE ALTICORE PROJECT**
*Stefano Vignudelli, Andrey Kostianoy, Anna Ginzburg, Nickolay Sheremet, Sergey Lebedev, Akexander Sirota, Helen M. Snaith, Jérôme Bouffard, Laurent Roblou, Paolo Cipollini*

13:40
**WE3.105.2** **COASTAL SEA SURFACE HEIGHTS FROM IMPROVED ALTIMETER DATA IN THE MEDITERRANEAN SEA**
*Luciana Fenoglio-Marc, Maraike Fehlau, Lucilla Ferri, Yong Gao, Stefano Vignudelli, Matthias Becker*

14:00
**WE3.105.3** **WET TROPOSPHERIC CORRECTION FOR COASTAL SATELLITE ALTIMETRY**
*M. Joana Fernandes, David Fernandes, Nelson Pires, Virgilio Mendes, Alexandra Nunes*

14:20
**WE3.105.4** **TIDE CORRECTIONS FOR COASTAL ALTIMETRY: STATUS AND PROSPECTS**
*Richard Ray, Gary Egbert*

14:40
**WE3.105.5** **FOUR-DIMENSIONAL VARIATIONAL ASSIMILATION OF SATELLITE TEMPERATURE AND SEA LEVEL DATA IN THE COASTAL OCEAN AND ADJACENT DEEP SEA**
*John Wilkin, Julia Levin, Javier Zavala-Garay, Weifeng Zhang*

Wednesday

## WE3.107: Wednesday, July 9, 13:20 - 15:00

**WE3.107** **Data Fusion III**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 107
Co-Chairs: Jocelyn Chanussot and Paolo Gamba

13:20
**WE3.107.1** **MULTI-SCALE SEGMENTATION AND OPTIMIZED COMPUTATION OF SPATIAL REASONING GRAPHS FOR OBJECT DETECTION IN REMOTE SENSING IMAGES**
*Julien Michel, Jordi Inglada*

13:40
**WE3.107.2** **A GENERIC FRAMEWORK FOR DISPARITY MAP ESTIMATION BETWEEN MULTI-SENSOR REMOTE SENSING IMAGES**
*Jordi Inglada, Julien Michel, Thomas Feuvrier*

14:00
**WE3.107.3** **A FUSION METHOD FOR MIXED PIXELS BASED ON CLASSIFICATION OF PANCHROMATIC IMAGE**
*Linhai Jing, Qiuming Cheng, Wenlei Wang*

14:20
**WE3.107.4** **MULTISOURCE IMAGE CLASSIFICATION BASED ON PARALLEL MINIMUM CLASSIFICATION ERROR LEARNING**
*Yang-Lang Chang, Lena Chang, Jyh-Perng Fang, Kun-Shan Chen*

14:40
**WE3.107.5** **OBJECTIVE EVALUATION OF REMOTE SENSING IMAGE FUSION BASED ON THE SINGULAR VALUE DECOMPOSITION**
*Zhu Weigang, Zhou Yinqing, Chen Jie, Sun Bin, Hou Guojiang*

## WE3.108: Wednesday, July 9, 13:20 - 15:00

**WE3.108** **Bistatic SAR I**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 108
Co-Chairs: Otmar Loffeld and Pascale Dubois-Fernandez

13:20
**WE3.108.1** **BISTATIC SPACEBORNE-AIRBORNE EXPERIMENT TERRASAR-X/F-SAR: DATA PROCESSING AND RESULTS**
*Marc Rodriguez-Cassola, Stefan V. Baumgartner, Gerhard Krieger, Anton Nottensteiner, Ralf Horn, Ulrich Steinbrecher, Robert Metzig, Markus Limbach, Rolf Scheiber, Marco Schwerdt, Alberto Moreira*

13:40
**WE3.108.2** **BISTATIC SAR INTERFEROMETRY EXPERIMENTS WITH THE INGARA IMAGING RADAR**
*Alvin Goh, Mark Preiss, Nick Stacy, Douglas Gray*

14:00
**WE3.108.3** **OPTIMIZING THE INDIVIDUAL AZIMUTH CONTRIBUTION OF TRANSMITTER AND RECEIVER PHASE TERMS IN LOFFELD'S BISTATIC FORMULA (LBF) FOR BISTATIC SAR PROCESSING**
*Qurat Ul-Ann, Otmar Loffeld, Holger Nies, Robert Wang, Stefan Knedlik*

14:20
**WE3.108.4** **GPS/INS INTEGRATION FOR FOOTPRINT CHASING IN BISTATIC SAR EXPERIMENTS**
*Stefan Knedlik, Junchuan Zhou, Zhen Dai, Ezzaldeen Edwan, Pakorn Ubolkosold, Otmar Loffeld*

14:40
**WE3.108.5** **A NEW BISTATIC-BASED SPARSE LINEAR ARRAY 3D IMAGING SAR MODEL**
*Yinbo Wang, Xiaoling Zhang, Weihua Li, Jun Shi*

## WE3.109: Wednesday, July 9, 13:20 - 15:00

**WE3.109** **Remote Sensing Education and Outreach**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 109
Co-Chairs: Ambrose Jearld and Barry Rock

13:20
**WE3.109.1** **USING ICEBOX TO VIEW AND EXPLORE SATELLITE IMAGES OF THE GULF OF MAINE**
*Annette Schloss, Denise Blaha, William Armstrong, Amy Cline*

13:40
**WE3.109.2** **FOREST WATCH: A K-12 OUTREACH PROGRAM TO ENGAGE PRE-COLLEGE STUDENTS IN AUTHENTIC, HANDS-ON SCIENCE**
*Barrett Rock, Michael Gagnon*

14:00
**WE3.109.3** **ADVANCED PREVIEW OF NPOESS METEOROLOGICAL PRODUCTS**
*Thomas Lee, Arunas Kuciauskas, F. Joseph Turk, Cristian Mitrescu, Jeffrey Hawkins, Kim Richardson, Steven Miller*

14:20
**WE3.109.4** **POLSARPRO V3.3: THE EDUCATIONAL TOOLBOX FOR POLARIMETRIC AND INTERFEROMETRIC POLARIMETRIC SAR DATA PROCESSING**
*Eric Pottier, Laurent Ferro-Famil, Sophie Allain, Shane Cloude, Irena Hajnsek, Konstantinos Papathanassiou, Alberto Moreira, Mark Williams, Andrea Minchella, Yves-Louis Desnos*

14:40
**WE3.109.5** **WINDOWS ON EARTH - MUSEUM & WEB VISITORS EXPLORE EARTH AS VIRTUAL ASTRONAUTS**
*Daniel Barstow*

## WE3.110: Wednesday, July 9, 13:20 - 15:00

**WE3.110** **Advances in Hyperspectral Applications: Hyperspectral Remote Sensing of Vegetation**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 110
Co-Chairs: Ting Liu and Anita Simic

13:20
**WE3.110.1** **LEAF AREA INDEX ESTIMATION USING LIDAR AND FOREST REFLECTANCE MODELLING OF AIRBORNE HYPERSPECTRAL DATA**
*Holger Lange, Svein Solberg*

13:40
**WE3.110.2** **EVALUATION OF HYPERION EO-1 HYPERSPECTRAL DATA TO ESTIMATE WHEAT CROP CHLOROPHYLL CONTENT IN PRECISION AGRICULTURE CONTEXT**
*Abdou Bannari, K. Shahid Khurshid, Karl Staenz, John Schwarz*

14:00
**WE3.110.3** **REFINING A HYPERSPECTRAL AND MULTI-ANGLE MEASUREMENT CONCEPT FOR VEGETATION STRUCTURE ASSESSMENT**
*Anita Simic, Jing M. Chen*

14:20
**WE3.110.4** **SPATIAL CLASSIFICATION OF HYPERSPECTRAL DATA OF DUNE VEGETATION ALONG THE BELGIAN COAST**
*Guy Thoonen, Steve De Backer, Sam Provoost, Pieter Kempeneers, Paul Scheunders*

14:40
**WE3.110.5** **STABILITY OF HYPERSPECTRALLY-DERIVED SYSTEM STATE INDICATORS ACROSS SEASONS IN A MANAGED, EVEN-AGED EUCALYPTUS STAND**
*Moses Cho, Jan van Aardt, Bongani Majeke, Russell Main*



## WE3.111: Wednesday, July 9, 13:20 - 15:00

**WE3.111** **Image Information Mining I**
Session Type: Oral-Invited
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 111
Co-Chairs: Roger King and Mihai Datcu

13:20
**WE3.111.1** **IMAGE INFORMATION MINING FOR EARTH OBSERVATION: A NEW ERA OF TECHNOLOGY**
*Mihai Datcu, Gottfried Schwarz, Klaus Seidel*

13:40
**WE3.111.2** **THE INTEGRATION OF GRAPH BASED KNOWLEDGE DISCOVERY WITH IMAGE SEGMENTATION HIERARCHIES FOR DATA ANALYSIS, DATA MINING AND KNOWLEDGE DISCOVERY**
*James C. Tilton, Diane J. Cook, Nikhil Ketkar*

14:00
**WE3.111.3** **AN APPLICATION OF GRAPH COMMUTE TIMES TO IMAGE INDEXING**
*Régis Behmo, Nikos Paragios, Véronique Prinet*

14:20
**WE3.111.4** **RAPID DAMAGE ASSESSMENT FROM HIGH RESOLUTION IMAGERY**
*Veeraraghavan Vijayaraj, Edward A. Bright, Budhendra L. Bhaduri*

14:40
**WE3.111.5** **ONTOLOGY-DRIVEN CONTENT MINING AND SEMANTIC QUERIES IN SATELLITE IMAGE DATABASES**
*Adrian Barb, Chi-Ren Shyu*

## WE3.203: Wednesday, July 9, 13:20 - 15:00

**WE3.203** **Retrieval of Aerosol Characteristics from Ground-based and Satellite Observations**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 203
Co-Chairs: Albin Gasiewski and Samuel Haimov

13:20
**WE3.203.1** **CONSTRUCTION OF SATELLITE DERIVED PM2.5 MAPS USING THE RELATIONSHIP BETWEEN AOD AND PM2.5 AT THE CABAUW EXPERIMENTAL SITE FOR ATMOSPHERIC RESEARCH (CESAR) – THE NETHERLANDS**
*Arnoud Apituley, Martijn Schaap, Robert Koelemeijer, Renske Timmermans, Robin Schoemaker, Gerrit de Leeuw*

13:40
**WE3.203.2** **ON THE VERTICAL DISTRIBUTION OF AEROSOLS AND LONG-RANGE TRANSPORT INFERRED FROM CALIPSO SATELLITE OBSERVATIONS**
*Charles Trepte, Dave Winker, Cheiko Kittka*

14:00
**WE3.203.3** **AN EVALUATION OF THE GOES-R ABI AEROSOL RETRIEVAL ALGORITHM**
*Hongqing Liu, Istvan Laszlo, Pubu Ciren, Mi Zhou, Shobha Kondragunta*

14:20
**WE3.203.4** **NPOESS AEROSOL PRODUCT RETRIEVALS FROM THE VIIRS INSTRUMENT**
*John Jackson, Eric Vermote, Eric Shettle*

14:40
**WE3.203.5** **COMPARISON STUDY BETWEEN MODIS TERRA AND AQUA FOR AOT RETRIEVAL OVER OCEAN**
*Sriharsha Madhavan, John Qu, Xiaoxiong (Jack) Xiong*



## WE3.210: Wednesday, July 9, 13:20 - 15:00

**WE3.210** **Observation Technologies For The Next Generation In Geoscience II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 13:20 - 15:00
Place: Room 210
Co-Chairs: Glenn Prescott and Mariann Albjerg

13:20
**WE3.210.1** **LASER SOUNDER FOR GLOBAL MEASUREMENT OF CO2 CONCENTRATIONS IN THE TROPOSPHERE FROM SPACE**
*Haris Riris, James Abshire, Graham Allan, Xiaoli Sun, Jeffrey Chen, Randy Kawa, Jian-Ping Mao, Mark Stephen, John Burris, Mike Krainak*

13:40
**WE3.210.2** **TROPOSPHERIC INFRARED MAPPING SPECTROMETERS (TIMS) TO PROVIDE MEASUREMENTS WITH MUCH IMPROVED VERTICAL, TEMPORAL AND SPATIAL RESOLUTION IN THE LOWER TROPOSPHERE**
*John B. (Jack) Kumer, Aidan E. Roche, Richard L. Rairden, John L. Mergenthaler, Jack Doolittle, Ronald Blatherwick, Toufic Hawat, Robert Chatfield*

14:00
**WE3.210.3** **PROGRESS IN OPTICAL TECHNOLOGY DEVELOPMENT FOR AEROSOL AND CLOUD REMOTE SENSING WITH THE MULTIANGLE SPECTROPOLARIMETRIC IMAGER (MSPI)**
*Anna-Britt Mahler, Russell Chipman, Steve McClain, David Diner, Ab Davis, Nasrat Raouf*

14:20
**WE3.210.4** **DESIGN AND PERFORMANCE CONSIDERATIONS FOR A SPACEBORNE DIGITAL RADIOMETER**
*Christopher Ruf, Steven Rogacki, Steven Gross*

14:40
**WE3.210.5** **UAVSAR - DEVELOPING A HIGHLY CAPABLE AIRBORNE INSTRUMENT TO SUPPORT EARTH SCIENCE**
*Robert Smith, Scott Hensley, Dennis Flower, Frank Cutler, Thomas Mace, Kevin Wheeler*

## WE4.101: Wednesday, July 9, 15:20 - 17:00

**WE4.101** **Geological Applications of Synthetic Aperture Radar**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 101
Chair: Vernon Singhroy

15:20
**WE4.101.1** **SAR MONITORING OF PERMAFROST MELT IN THE LOWER MACKENZIE VALLEY, CANADA.**
*Pierre-Jean Alasset, Valentin Poncos, Vern Singhroy, Rejean Couture*

15:40
**WE4.101.2** **AUTOMATIC RETRIEVAL OF TECTONIC PARAMETERS WITH NEURAL NETWORKS AND SAR INTERFEROMETRY: AN ASSESSMENT WITH EXPERIMENTAL DATA**
*Fabio Del Frate, Giovanni Schiavon, Salvatore Stramondo*

16:00
**WE4.101.3** **AVALANCHE IMAGING RADAR**
*Lei Wang, Paul Brennan*

16:20
**WE4.101.4** **ANALYSIS TECHNIQUE FOR EXTRACTION OF LOCAL AND FAINT CHANGES FROM A SATELLITE-BORNE MICROWAVE RADIOMETER DATA**
*Takashi Maeda, Tadashi Takano*

16:40
**WE4.101.5** **INSAR PHASE UNWRAPPING BASED ON A COMBINATION OF MARKOV RANDOM FIELDS AND HYPERGEOMETRIC PHASE PDF MODELS**
*Amor Elmzoughi, Ahmed Maalij, Riadh Abdelfattah, Ziad Belhadj*



## WE4.102: Wednesday, July 9, 15:20 - 17:00

**WE4.102** **PolSAR and Pol-InSAR for Agricultural Information Product Development II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 102
Co-Chairs: Irena Hajnsek and Eric Gauthier

15:20
**WE4.102.1** **CLASSIFICATION OF WHEAT CROPS FROM ASAR AND PALSAR DATA**
*Giuseppe Satalino, Francesco Mattia*

15:40
**WE4.102.2** **SOIL MOISTURE ESTIMATION IN TIME WITH AIRBORNE D-INSAR**
*Irena Hajnsek, Pau Prats*

16:00
**WE4.102.3** **SMALL TEMPORAL BASELINE SUBSET (STBAS):A NEW INSAR TECHNIQUE FOR MULTI-TEMPODAL MONITORING WETLAND'S WATER LEVEL CHANGES**
*Sang-Hoon Hong, Shimon Wdowinski, Sang-Wan Kim, Falk Amelung, Timothy H. Dixon*

16:20
**WE4.102.4** **MICROWAVE SCATTERING PROFILES OF A RICE SAMPLE BY MEANS OF POLARIZATION COHERENCE TOMOGRAPHY**
*Maria-Jose Sanjuan, Juan M. Lopez-Sanchez, J. David Ballester-Berman*

16:40
**WE4.102.5** **COMPARISON BETWEEN MULTITEMPORAL AND POLARIMETRIC SAR DATA FOR LAND COVER CLASSIFICATION**
*Henning Skriver*

## WE4.103: Wednesday, July 9, 15:20 - 17:00

**WE4.103** **Passive Microwave Remote Sensing of Terrestrial Snow II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 103
Co-Chairs: Paolo Pampaloni and Leung Tsang

15:20
**WE4.103.1** **SNOW RADIANCE ASSIMILATION REQUIREMENTS: A CASE STUDY USING CLPX-1**
*Edward Kim, Michael Durand, Steve Margulis*

15:40
**WE4.103.2** **SNOW EMISSION AT AMSU FREQUENCIES: MEASUREMENT AND MODELLING RESULTS FROM THE ALASKA PHASE OF THE COLD LAND PROCESSES EXPERIMENT (CLPX-II)**
*R. Chawn Harlow*

16:00
**WE4.103.3** **THE RELATIONSHIP BETWEEN THE MEAN RADIUS OF SNOW GRAINS AND SNOW CORRELATION LENGTHS ASCERTAINED FROM MICROWAVE SCATTERING THEORY**
*R. Chawn Harlow*

16:20
**WE4.103.4** **CORRECTING BRIGHTNESS TEMPERATURE OBSERVATIONS OVER SNOW FROM NASA'S ADVANCED MICROWAVE SCANNING RADIOMETER – EOS**
*Richard E. J. Kelly, Marco Tedesco, James Foster*

16:40
**WE4.103.5** **SEASONAL RETRIEVAL OF SNOW WATER EQUIVALENT (SWE) AND TEMPERATURE USING IN-SITU PASSIVE MICROWAVE RADIOMETRY IN SOUTHERN QUÉBEC**
*Alexandre Langlois, Ludovic Brucker, Alain Royer, Patrick Harvey-Collard, Michel Fily, Ghislain Picard, Ken Asmus, Anne Walker, Kalifa Goïta, Jean-Marie Willement*



## WE4.104: Wednesday, July 9, 15:20 - 17:00

**WE4.104** **Evapotranspiration Estimation at Field Scale**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 104
Co-Chairs: Jasmeet Judge and Brian Hornbuckle

15:20
**WE4.104.1** **CAN WE DERIVE NEAR DAILY EVAPOTRANSPIRATION MAPS AT FIELD SCALE RESOLUTION WITH THE AVAILABLE SPACEBORNE SYSTEMS?**
*Nurit Agam, William P. Kustas, Martha C. Anderson, Fuqin Li, Paul D. Colaizzi*

15:40
**WE4.104.2** **A METHOD TO DETERMINE THE APPROPRIATE SPATIAL RESOLUTION REQUIRED FOR MONITORING CROP GROWTH IN A GIVEN AGRICULTURAL LANDSCAPE**
*Grégory Duveiller, Pierre Defourny, Bruno Gerard*

16:00
**WE4.104.3** **SOLAR RADIANCE ESTIMATION BY MEANS OF METEOSAT 2ND GENERATION DATA AND NEURAL PROCESSING: A VINEYARD PRECISION FARMING CASE STUDY**
*Alessandro Burini, Chiara Solimini, Roberto Cossu, Luigi Fusco, Domenico Solimini, Stefania Argentini*

16:20
**WE4.104.4** **ESTIMATION OF PLANT CHLOROPHYLL USING HYPERSPECTRAL OBSERVATIONS AND RADIATIVE TRANSFER MODELS: SPECTRAL INDICES SENSITIVITY AND CROP-TYPE EFFECTS**
*Driss Haboudane, Nicolas Tremblay, John R. Miller, Philippe Vigneault*

16:40
**WE4.104.5** **AN DIURNAL MODEL BASED ON GEOSTATIONARY SATELLITE DATA FOR LAND SURFACE EVAPOTRANSPIRATION**
*Changsen Zhao, Jun Xia, Xiaoyu Zhang, Renhua Zhang, Zhaoliang Li, Penelope Serrano-Ortiz, Sergio Contreras*

## WE4.105: Wednesday, July 9, 15:20 - 17:00

**WE4.105** **Coastal Altimetry II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 105
Co-Chairs: William Emery and Paolo Cipollini

15:20
**WE4.105.1** **INVESTIGATING OCEAN ALTIMETER DATA AND APPLICATIONS IN THE GULF OF MAINE**
*Doug Vandemark, Hui Feng, Remko Scharroo*

15:40
**WE4.105.2** **IMPROVED COASTAL ALTIMETRY APPLIED TO MONITOR SMALL SCALE DYNAMICS OVER THE MEDITERRANEAN SEA.**
*Jérôme Bouffard, Laurent Roblou, Stefano Vignudelli, Patrick Marsaleix, Paolo Cipollini, Yves Ménard, Florence Birol*

16:00
**WE4.105.3** **DEVELOPING RADAR ALTIMETRY IN THE OCEANIC COASTAL ZONE: THE COASTALT PROJECT**
*Paolo Cipollini, Jesus Gómez-Enri, Christine Gommenginger, Cristina Martin-Puig, Stefano Vignudelli, Philip Woodworth, Jérôme Benveniste*

16:20
**WE4.105.4** **MONITORING SEA LEVEL BY RADAR ALTIMETER AND CGPS IN THE NORTH-WESTERN MEDITERRANEAN**
*Juan Jose Martinez-Benjamin, Jose Martin Davila, Jorge Garate Pasquin, Pascal Bonnefond, Marina Martinez-Garcia, Miquel Angel Ortiz Castellon, Julia Talaya Lopez, Gema Rodriguez Velasco, Begoña Perez Gomez*

16:40
**WE4.105.5** **ON THE COHERENCE OF NADIR ALTIMETER SIGNALS OVER WATER WITH ENVISAT RA-2 INDIVIDUAL ECHOES**
*Christine Gommenginger, Graham Quartly, Peter Challenor, Catherine Rogers, Jérôme Benveniste*



## WE4.107: Wednesday, July 9, 15:20 - 17:00

**WE4.107** **Geospatial Based Analysis**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 107
Co-Chairs: Selim Aksoy and Jordi Inglada

15:20
**WE4.107.1** **GIS CUSTOMIZATION FOR GLOBAL SEA ICE ANALYSES**
*Brian Melchior*

15:40
**WE4.107.2** **DELINIATION OF SLOPE UNITS BASED ON SCALE AND RESOLUTION INVARIANT 3D CURVATURE EXTRACTION**
*Erdem Akagunduz, Arzu Erener, Ilkay Ulusoy, H. B. Sebnem Duzgun*

16:00
**WE4.107.3** **FLOOD FORECASTING AND RISK MAPPING USING A WEB-BASED SPATIAL DECISION SUPPORT SERVICES APPROACH**
*Lei Wang, Qiuming Cheng*

16:20
**WE4.107.4** **MINING OF REMOTE SENSING IMAGE ARCHIVES USING SPATIAL RELATIONSHIP HISTOGRAMS**
*Selim Aksoy, Firat Kalaycilar, Asli Kale, Daniya Zamalieva*

16:40
**WE4.107.5** **VEGETATION PHENOLOGY METRICS DERIVED FROM TEMPORALLY SMOOTHED AND GAP-FILLED MODIS DATA**
*Bin Tan, Jeffrey Morisette, Robert Wolfe, Feng Gao, Gregory Ederer, Joanne Nightingale, Jeffrey Pedelty*

## WE4.108: Wednesday, July 9, 15:20 - 17:00

**WE4.108** **Bistatic SAR II**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 108
Co-Chairs: Otmar Loffeld and Pascale Dubois-Fernandez

15:20
**WE4.108.1** **ANALYSIS AND PROCESSING OF SPACEBORNE/AIRBORNE BISTATIC SAR DATA**
*Yu (Robert) Wang, Otmar Loffeld, Qurat Ul-Ann, Holger Nies, Amaya Medrano Ortiz, Ashraf Samarah*

15:40
**WE4.108.2** **FORWARD AND BACKWARD BISTATIC INTERFEROMETRY**
*Sergi Duque, Paco López-Dekker, Jordi J. Mallorqui, Juan Carlos Merlano*

16:00
**WE4.108.3** **POLARIMETRIC BISAR IMAGE SIMULATION AND ANALYSIS**
*Ya-Qiu Jin, Feng Xu*

16:20
**WE4.108.4** **AIRBORNE BISTATIC SAR RECEIVER WITH THE CAPABILITY OF USE DIFFERENT OPPORTUNITY TRANSMITTERS.**
*Juan Carlos Merlano, Paco López-Dekker, Jordi J. Mallorqui, Sergi Duque*

16:40
**WE4.108.5** **SECOND-ORDER MOTION COMPENSATION IN BISTATIC AIRBORNE SAR BASED ON THE WINDOWED FOURIER-TRANSFORMATION**
*Amaya Medrano Ortiz, Otmar Loffeld, Holger Nies, Robert Wang*

## WE4.109: Wednesday, July 9, 15:20 - 17:00

**WE4.109** **Remote Sensing and Policy Decisions**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 109
Co-Chairs: Barry Rock and David Llewellyn-Jones

15:20
**WE4.109.1** **STUDY ON LAND-USE MANAGEMENT MODE FOR BEIJING DONGCHENG DISTRICT BASED ON RS & GIS**
*Xindong He, Cuilin Hu, Yingchang Song, Yuyan Meng, Benfan Liang*

15:40
**WE4.109.2** **MAINTAINING DATA RECORDS: PRACTICAL DECISIONS REQUIRED FOR DATA SET PRIORITIZATION, PRESERVATION, AND ACCESS**
*Ronald L. S. Weaver, Ruth M. Duerr, Walter N. Meier*

16:00
**WE4.109.3** **CONTRIBUTIONS FROM REMOTE SENSING TO POLICY DEVELOPMENT RELATED TO GENETICALLY MODIFIED CROPS IN US AGRICULTURE**
*Dr. John Glaser, Kenneth Copenhaver, Joe Casas, Karen Stephens, Glen Alexander*

16:20
**WE4.109.4** **THE SIGRIS PROJECT: A REMOTE SENSING SYSTEM FOR SEISMIC RISK MANAGEMENT**
*Christian Bignami*

## WE4.110: Wednesday, July 9, 15:20 - 17:00

**WE4.110** **Remote Sensing on the African Continent**
Session Type: Oral-Invited
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 110
Co-Chairs: Mohamed Mohamed and Charles Luther

15:20
**WE4.110.1** **ASSESSING THE USE OF COARSE RESOLUTION IMAGERY FOR PRIORITIZING DROUGHT PRONE/SEVERELY DEGRADED AREAS FOR MITIGATION POLICY OPTIONS IN SOUTH AFRICA**
*Brilliant Petja, Dawie van Zyl, Phila Sibandze, Mokhele Moeletsi, Sylvester Mpandeli, Matiga Motsepe, Thabo Mashego*

15:40
**WE4.110.2** **FIELD SURVEYS FOR BIOMASS ASSESSMENT IN AFRICAN SAVANNA WOODLANDS**
*Charles Paradzayi, Harold John Annegarn, Ruwadzano Matsika, Barend Erasmus*

16:00
**WE4.110.3** **USING SATELLITE IMAGERY TO MAP THE VEGETATION OF MOLEMANE EYE NATURE RESERVE IN THE NORTH WEST PROVINCE, SOUTH AFRICA**
*Wilfred Seitlhamo, David Makgale*

16:20
**WE4.110.4** **OVERCOMING BANDWIDTH AND SATELLITE COMMUNICATIONS LIMITATIONS TO ACCELERATE APPLICATIONS OF REMOTE SENSING AND HIGH PERFORMANCE COMPUTING FOR AFRICAN DEVELOPMENT: CONTRIBUTIONS FROM EGYPT, NIGERIA AND SOUTH AFRICA**
*Gilbert Rochon, M. Magdy Abdel Wahab, Gad El-Qady, Gamal El Afandi, Ado Dan-Isa, Happy Sithole, Khomotso Kganyago, Souleymane Fall, Joseph Emmanuel Quansah, Bereket Araya*

16:40
**WE4.110.5** **A LAND COVER CHANGE SYNTHESIS STUDY FOR THE GLOWA VOLTA BASIN IN WEST AFRICA USING TIME TRAJECTORY SATELLITE OBSERVATIONS AND CELLULAR AUTOMATION MODELS**
*Tobias Landmann, Miriam Machwitz, Quang Bao Le, Lulseged Desta, Paul Vlek, Stefan Dech, Michael Schmidt*

## WE4.111: Wednesday, July 9, 15:20 - 17:00

**WE4.111** **Image Information Mining II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 111
Co-Chairs: Mihai Datcu and Roger King

15:20
**WE4.111.1** **INTELLIGENT DATA THINNING ALGORITHMS FOR SATELLITE IMAGERY**
*Rahul Ramachandran, Xiang Li, Sunil Movva, Sara Graves, Bradley Zavodsky, Michael Splitt, Steven Lazarus, Mike Lueken, William Lapenta William Lapenta*

15:40
**WE4.111.2** **A PROPOSAL FOR THE STANDARDIZATION OF IMAGE INFORMATION MINING SYSTEMS VIA OGC WEB SERVICES FRAMEWORK**
*Surya Durbha, Roger King, Nicolas Younan, Balakrishna Gokaraju*

16:00
**WE4.111.3** **SEGMENTATION AND CLASSIFICATION OF HYPERSPECTRAL DATA USING WATERSHED**
*Yuliya Tarabalka, Jocelyn Chanussot, Jón Atli Benediktsson, Jesus Angulo, Mathieu Fauvel*

16:20
**WE4.111.4** **IMPROVING HYPERSPECTRAL IMAGE CLASSIFICATION BASED ON GRAPHS USING SPATIAL PREPROCESSING**
*Santiago Velasco-Forero, Vidya Manian*

16:40
**WE4.111.5** **TERRASAR-X IMAGING FOR UNSUPERVISED LAND COVER CLASSIFICATION AND FIRE MAPPING**
*Cosimo Putignano, Domenico Solimini, Alessandro Burini, Fabio Del Frate, Giovanni Schiavon, Giorgio Licciardi, Lazzarini Michele, Paolo Manunta, Francesco De Biasi*



## WE4.203: Wednesday, July 9, 15:20 - 17:00

**WE4.203** **Optical & Infrared Modeling for Remote Sensing I**
Session Type: Oral-Contributed
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 203
Co-Chairs: Vivienne Payne and Bradley Kimmel

15:20
**WE4.203.1** **ATMOSPHERIC COMPENSATION USING A GEOMETRICALLY-COMPENSATED EMPIRICAL LINE METHOD**
*Stephen Lach, John Kerekes*

15:40
**WE4.203.2** **A PRACTICAL ANALYTICAL APPROACH FOR PREDICTING SAND SPECTRAL SIGNATURES**
*Bradley Kimmel, Gladimir Baranoski*

16:00
**WE4.203.3** **ATMOSPHERIC CORRECTIONS OF LOW ALTITUDE THERMAL INFRARED AIRBORNE IMAGES ACQUIRED OVER A TROPICAL CROPPED AREA**
*Lebourgeois Valentine, Labbe Sylvain, Jacob Frédéric, Begue Agnès*

16:20
**WE4.203.4** **MODELING OF THICKNESS DEPENDENT THERMAL CONTRAST OF NATIVE AND CRUDE OIL COVERED WATER SURFACES**
*Wei-Chuan Shih, A. Ballard Andrews*

16:40
**WE4.203.5** **STATUS OF THE AER RADIATIVE TRANSFER MODELS**
*Vivienne Payne, Mark Shephard, Karen Cady-Pereira, Jennifer Delamere, Eli Mlawer, Mike Iacono, Jean-Luc Moncet, Tony Clough*

## WE4.210: Wednesday, July 9, 15:20 - 17:00

**WE4.210** **Advanced Lidar Technologies and Applications to 3D Landcover Structure II**
Session Type: Oral-Invited
Time: Wednesday, July 9, 15:20 - 17:00
Place: Room 210
Co-Chairs: Clint Slatton and David J. Harding

15:20
**WE4.210.1** **SIGNAL PROCESSING TECHNIQUES FOR FEATURE EXTRACTION AND CLASSIFICATION USING SMALL-FOOTPRINT FULL-WAVEFORM AIRBORNE LIDAR**
*Amy Neuenschwander, Lori Magruder, Roberto Gutierrez*

15:40
**WE4.210.2** **TWO-STAGE APPROACHES FOR DECOMPOSITION OF ICESAT WAVEFORMS**
*Jinha Jung, Melba Crawford*

16:00
**WE4.210.3** **EXPLORING THE MEASUREMENT OF FORESTS WITH FULL WAVEFORM LIDAR THROUGH MONTE-CARLO RAY TRACING**
*Steven Hancock, Mathias Disney, Philip Lewis, Jan-Peter Muller*

16:20
**WE4.210.4** **PREDICTING L-BAND MICROWAVE ATTENUATION THROUGH FOREST CANOPY USING DIRECTIONAL STRUCTUING ELEMENTS AND AIRBORNE LIDAR**
*William Wright, Pang-Wei Liu, K. Clint Slatton, Ramesh Shrestha, William E. Carter*

16:40
**WE4.210.5** **THE SWATH IMAGING MULTI-POLARIZATION PHOTON-COUNTING LIDAR (SIMPL): A SPACEFLIGHT PROTOTYPE**
*David Harding, James Abshire, Philip Dabney, Antonios Seas, Christopher Shuman, Xiaoli Sun, Susan Valett, Aleksey Vasilyev, Tony Yu, Tim Huss, Joe Marzouk, Yunhui Zheng*

## WEP.A: Wednesday, July 9, 17:00 - 18:30

**WEP.A** **Land Cover Classification and Characterization**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area A
Co-Chairs: Joseph Buckley and Marc Simard

**WEP.A.1** **A COMPARISON OF PRESENT AND POTENTIAL SPATIAL DISTRIBUTION OF VEGETATION IN THE GROUNDWATER-FLUCTUATING BELT IN LOWER REACHES OF HEIHE RIVER, NORTHWESTERN CHINA**
*Yanhong Jia, Chuanyan Zhao, Zhongren Nan*

**WEP.A.2** **APPLE ORCHARD CHARACTERIZATION USING REMOTE SENSING & GIS FOR KULLU DISTRICT OF HIMACHAL PRADESH**
*Alka Sharma*

**WEP.A.3** **THE CHARACTERIZATION OF A FOREST COVER THROUGH SHAPE AND TEXTURE PARAMETERS FROM QUICKBIRD IMAGERY**
*Choen Kim, Sung-Hoo Hong*

**WEP.A.4** **COMPARISON STUDY ON NDII AND NDVI BASED ON RICE EXTRACTION FROM RICE AND GINKGO MIXED AREA**
*Chao Xu, Xiufang Zhu, Yaozhong Pan, Wenquan Zhu*

**WEP.A.5** **A MULTI-SCALE APPROACH FOR RETREIVING PROPORTIONAL COVER OF LIFE FORMS**
*Ursula Gessner, Christopher Conrad, Christian Hüttich, Manfred Keil, Michael Schmidt, Matthias Schramm, Stefan Dech*

**WEP.A.6** **POLARIMETRIC CLASSIFICATION OF VEGETATION IN PRAIRIE LANDSCAPES**
*Joseph Buckley*

**WEP.A.7** **AIRBORNE LASER MAPPING OF GAPS IN MANGROVE FORESTS IN EVERGLADES NATIONAL PARK, USA**
*Keqi Zhang, Marc Simard, Michael Ross, Victor Rivera-Monroy*

**WEP.A.8** **PREDICTION OF PLANT NITROGEN: SPECTRAL WAVELENGTHS STABLE THROUGH VEGETATION STATES**
*Nicky Knox, Andrew Skidmore*

**WEP.A.9** **MAPPING FOREST TYPES USING MULTI-SENSOR REMOTE SENSING METHODS**
*Amber Smith, Barrett Rock*

## WEP.B: Wednesday, July 9, 17:00 - 18:30

**WEP.B** **Hyperspectral and Optical Remote Sensing of Vegetation**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area B
Co-Chairs: Andrew Dyk and Josée Lévesque

**WEP.B.1** **EVALUATION OF SPECTRAL VEGETATION INDEX TRANSLATION EQUATIONS FOR THE DEVELOPMENT OF LONG-TERM DATA RECORDS**
*Tomoaki Miura, Hiroki Yoshioka, Tomoko Suzuki*

**WEP.B.2** **DEVELOPMENT OF RICE YIELD ESTIMATION METHOD BASED ON SPACEBORNE HYPERSPECTRAL DATA: PRELIMINARY STUDY USING AIRBORNE HYPERSPECTRAL DATA**
*Shinya Odagawa, Masatane Kato, Tomoyuki Suhama, Jiro Sasaki, Kuniaki Uto, Yukio Kosugi, Genya Saito*

**WEP.B.3** **MONITORING GROWTH STATUS OF SPRING WHEAT IN RAINFED AGRICULTURE AREA IN LOESS PLATEAU WITH HYPERSPECTRAL REFLECTANCE DATA AT CANOPY AND LEAF LEVEL**
*Xiaoping Wang, Ni Guo, Jing Wang, Jie Zhang, Jingsong Wang*

**WEP.B.4** **AN ANALYSIS OF SEASONAL EFFECT ON TREE SPECIES IDENTIFICATION USING HYPERSPECTRAL DATA AND ADVANCED CLASSIFICATION TECHNIQUES**
*Ramanathan Sugumaran, Matthew Voss*

**WEP.B.5** **SOUTHERN PINE BEETLE (DENDROCTONUS FRONTALIS ZIMM.) HAZARD MODELING IN NORTH CAROLINA – INCORPORATION OF REMOTELY SENSED VARIABLES**
*Jason Moan, Randolph Wynne, Scott Salom*

## WEP.C: Wednesday, July 9, 17:00 - 18:30

**WEP.C** **Optical & Infrared Modeling for Remote Sensing II**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area C
Chair: Bradley Kimmel

**WEP.C.1** **CORRELATED-K BASED FAST, ACCURATE BANDPASS RADIANCE AND TRANSMITTANCE CALCULATIONS FOR HYPERSPECTRAL AND MULTISPECTRAL SCENES**
*Prabhat Acharya, Alexander Berk, Raphael Panfili, Steven Adler-Golden, Alan Wetmore, Richard Shirkey*

**WEP.C.2** **SIMULATON OF HYPERSPECTRAL SCENE WITH FULL ADJACENCY EFFECT**
*Guorui Jia, Huijie Zhao, Na Li*

**WEP.C.3** **USING HYPERSPECTRAL DATA TO IMPROVE BACKGROUND MODELING OF AIRBORNE PANCHROMATIC IMAGERY**
*Jerrold Baum*

**WEP.C.4** **DRIVING REALISTIC TEXTURE IN SIMULATED LONG-WAVE INFRARED IMAGERY**
*Jason Ward, John R. Schott, Niek Sanders, Scott Brown*

**WEP.C.5** **ESTIMATION OF GLOBAL SOLAR IRRADIANCE AT THE COMPLICATE TERRAINS IN ZHEJIANG PROVINCE, CHINA**
*Gaoli Su, Xiaozhou Xin, Qinhuo Liu*

**WEP.C.6** **LEAF AREA INDEX AND SURFACE ALBEDO ESTIMATION: COMPARATIVE ANALYSIS FROM VEGETATION INDEXES TO RADIATIVE TRANSFER MODELS**
*Katja Richter, Francesco Vuolo, Guido D'Urso*

**WEP.C.7** **LAND SURFACE TEMPERATURE RETRIVAL FOR FRIGID ZONE WITH MICROWAVE DATA**
*Danqing Peng, Yunhao Chen, Jing Li, Ji Zhou*

**WEP.C.8** **THE LAI INVERSION BASED ON DIRECTIONAL SECOND DERIVATIVE OF HYPERSPECTRAL DATA**
*Xiaochen Liu, Wenjie Fan, Qingjiu Tian, Xiru Xu*

**WEP.C.9** **THE RELATIONSHIP BETWEEN THE DIRECTIONAL BRIGHTNESS TEMPERATURES AND HEMISPHERICAL THERMAL EMISSION OVER THREE SCENES**
*Yu-Li Shi, You-Jun Dou*

**WEP.C.10** **NUMERICAL STUDIES OF POLARIZED LIGHT REFLECTION FROM WIND ROUGHED LIQUID SURFACE**
*Santo V. Salinas Cortijo, Soo Chin Liew*

**WEP.C.11** **ATMOSPHERIC CORRECTION ERROR MODEL VALIDATION USING HYPERSPECTRAL MULTI-ALTITUDE DATA**
*Shems-eddine Zidane, Norm O'Neill, Martin Bergeron*

## WEP.D: Wednesday, July 9, 17:00 - 18:30

**WEP.D** **Forests and Vegetation: MODIS**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area D
Co-Chairs: Miguel Román and Tomoaki Miura

**WEP.D.1** **A SEVEN-YEAR ANALYSIS OF WATER RELATED INDICES FOR GEORGIA DROUGHT ASSESSMENT OVER THE 2007 WILDFIRE REGIONS**
*Lingli Wang, John Qu, Xiaoxiong (Jack) Xiong*

**WEP.D.2** **DOWNSCALING THE MODIS NDVI PRODUCT FOR PINE ECOSYSTEM PRODUCTIVITY ESTIMATES**
*Valquiria Quirino, Randolph Wynne, Xue Liu, Christine Blinn*

**WEP.D.3** **QUANTIFYING NDVI CROSS-SCALE RELATIONSHIP USING SPATIAL AUTOCORRELATION**
*Xiaoling Chen, Shoujing Yin*

**WEP.D.4** **GLOBAL STATISTICS RETRIEVED FROM THE MODIS BRDF PRODUCTS FOR EACH IGBP CLASS**
*Qingling Zhang, Crystal Schaaf, Alan Strahler, Michael King, Eric Moody*

**WEP.D.5** **ESTIMATION OF PHOTOSYNTHETIC LIGHT USE EFFICIENCY IN SEMI-ARID ECOSYSTEMS WITH THE MODIS-DERIVED PHOTOCHEMICAL REFLECTANCE INDEX**
*Anna Goerner, Markus Reichstein, Serge Rambal*

**WEP.D.6** **ASSESSMENT OF SURFACE ALBEDO DERIVED FROM MODIS OVER FORESTED LANDSCAPES**
*Miguel O. Román III, Crystal Schaaf, Alan Strahler, Manish Verma, Nathan Phillips, Mark Friedl*

**WEP.D.7** **COMPARISION OF LANDSAT AND MODIS ESTIMATES OF HEAT FLUXES: EFFECT OF SURFACE HETEROGENIETY**
*Xiaodong Zhang, Tedros Berhane, George Seielstad*

**WEP.D.8** **ASSESSING THE EFFECT OF CLIMATE CHANGE ON HONEY BEES USING SCALE HIVE RECORDS AND SATELLITE VEGETATION PHENOLOGY PRODUCTS**
*Joanne Nightingale, Wayne Esaias, Robert Wolfe, Nickeson Jaime, Jeffrey Pedelty*

**WEP.D.9** **A STUDY OF CHINESE GRASSLAND PRODUCTIVITY USING MODIS DATA**
*Shirong Chen, Yida Fan, Feng Xu, Guicai Li*

**WEP.D.10** **AN ANGULAR INDEX TO INDICATE SURFACE HETEROGENEOUS BEHAVIORS FROM MODIS**
*Ziti Jiao, Crystal Schaaf, Feng Gao, Alan Strahler, Xiaowen Li, Jindi Wang, Jicheng Liu*

**WEP.D.11** **APPLICATION OF VEGETATION CONDITION INDEX AND STANDARDIZED VEGETATION INDEX FOR ASSESMENT OF SPRING DROUGHT IN SOUTH KOREA**
*Jung Sool Park, Kyung Tak Kim, Yun Seok Choi*

## WEP.E: Wednesday, July 9, 17:00 - 18:30

**WEP.E** **Forests and Vegetation: Modeling, Algorithms and Simulations**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area E
Co-Chairs: Karl Huemmrich and Yen-Ben Cheng

**WEP.E.1** **THE SIMULATION OF A SIMPLIFIED BRANCH BASED ON RADIOSITY METHOD**
*Xinyun Wang, Guoqing Sun, Wenhan Qin, Zhifeng Guo*

**WEP.E.2** **3D DIGITIZING OF PADDY RICE AND MODELING FOR THE SCATTERING SIMULATION**
*Junichi Susaki, Atsushi Koura, Masayuki Tamura*

**WEP.E.3** **BUILDING GOOD SPECTRAL VEGETATION BACKGROUNDS IN THE VNIR**
*James (Jim) Kester*

**WEP.E.4** **COMPARISONS BETWEEN IN SITU ANISOTROPIC REFLECTANCE MEASUREMENTS AND SIMULATIONS FOR VEGETATION CANOPIES: VALIDATION AND SENSITIVITY ANALYSIS**
*Yen-Ben Cheng, Lawrence Corp, Elizabeth Middleton, Karl Huemmrich, Qingyuan Zhang, Petya Campbell, Geoffrey Parker*

**WEP.E.5** **INTRODUCTION OF THE SHADOWING KERNEL FOR BRDF ANALYSIS**
*Yoshiyuki Kawata*

**WEP.E.6** **UNDERSTANDING THE VEGETATION EFFECTS AT FROZEN ENVIROMENT BY THEORY AND FIELD EXPERIMENT**
*Yue Zheng, Zhongjun Zhang, Guoqing Sun, Lixin Zhang, Shengli Wu*

**WEP.E.7** **LANDSAT-BASED PROCESS MODELING FOR LOBLOLLY PINE CARBON MANAGEMENT**
*Randolph Wynne, Christopher Potter, Xue Liu, Christine Blinn*

**WEP.E.8** **ANISOTROPIC CHARACTERISTICS ANALYSIS OF RED EDGE PARAMETERS FOR WINTER WHEAT**
*Xuehong Zhang, Yansong Bao*

## WEP.F: Wednesday, July 9, 17:00 - 18:30

**WEP.F** **Forests and Vegetation: Seasonal Processes**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area F
Co-Chairs: Christine Blinn and Karen Steenkamp

**WEP.F.1** **COPMARISION OF INDIVIDUAL CROWNS AMONG SPECIES IN JAPANESE CONIFER PLANTATIONS USING AIRBORNE DATA FOR LEAF-ON AND LEAF-OFF CONDITIONS**
*Masato Katoh*

**WEP.F.2** **STUDY OF IMPACT OF URBANIZATION ON PHENOLOGY USING MULTISOURCE SATELLITE DATA**
*Hong Xu, Xi Yang, Qingxu Huang, Weihua Fang, Peijun Shi*

**WEP.F.3** **DISCRIMINATION OF THE RESPECTIVE CONTRIBUTIONS OF UNDERSTORY AND TREE CANOPY TO THE SEASONAL DYNAMICS OF REFLECTANCE OF MARITIME PINE FOREST IN SOUTHWEST FRANCE**
*Nathalie Yauschew-Raguenes, Dominique Guyon, Alain Kruszewski, Olivier Hagolle, Jean-Pierre Wigneron*

**WEP.F.4** **MEASUREMENTS OF SEASONAL CHANGES IN VEGETATION REFLECTANCE SPECTRA**
*John Cipar, Thomas Cooley, Ronald Lockwood*

**WEP.F.5** **LONG-TERM PHENOLOGY AND VARIABILITY OF SOUTHERN AFRICAN VEGETATION.**
*Karen Steenkamp, Konrad Wessels, Sally Archibald, Graham von Maltitz*

**WEP.F.6** **PASTURE MONITORING FROM POLARIMETRIC TERRASAR-X DATA**
*David Pairman, Stephen McNeill, Dawn Dalley, Robyn Dynes*

**WEP.F.7** **STUDY ON THE VEGETATION DYNAMIC CHANGE USING LONG TIME SERIES OF REMOTE SENSING DATA**
*Jinlong Fan, Xiaoyu Zhang*

**WEP.F.8** **TRACKING LOBLOLLY PINE GROWTH THROUGH TIME WITH LANDSAT IMAGERY**
*Christine Blinn, Randolph Wynne, Ralph Amateis, Thomas Fox*

**WEP.F.9** **WEB CAMERAS IN AUTOMATIC AUTUMN COLOUR MONITORING**
*Heikki Astola, Matthieu Molinier, Tapani Mikkola, Eero Kubin*

## WEP.G: Wednesday, July 9, 17:00 - 18:30

**WEP.G** **Forests and Vegetation: Fire, Disturbance, and Recovery**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area G
Co-Chairs: Martin Beland and Wenge Ni-Meister

**WEP.G.1** **ANALYSIS OF DIFFERENT METHODS FOR BURNT AREA ESTIMATION USING REMOTE SENSING AND GROUND TRUTH DATA**
*Alfonso Alonso Benito, Pedro Hernández Leal, Alejandro González Calvo, Manuel Arbelo, África Barreto*

**WEP.G.2** **REMOTE SENSING ASSESSMENT OF FIRE AND BURN SEVERITY IN THE ALASKA BOREAL FOREST REGION**
*Nancy French, Eric Kasischke*

**WEP.G.3** **EFFECT OF BURN SCAR PATTERN VARIABILITY ON MEDIUM RESOLUTION BURNT AREA MAPPING IN SOUTHEAST ASIA**
*Soo Chin Liew, Jukka Miettinen*

**WEP.G.4** **RETRIEVAL OF SUBPIXEL FIRE TEMPERATURE AND FIRE AREA USING SIMULATED HJ-1B DATA**
*Yonggang Qian, Guang-Jian Yan, Zhao-Liang Li, Sibo Duan, Renhua Zhang, Xiangsheng Kong*

**WEP.G.5** **LINKING EL NIÑO TO WILDFIRES GLOBALLY FROM REMOTE SENSING (1981-2000)**
*David Riaño, José A. Moreno-Ruíz, Daniel Isidoro, Julio Barón-Martinez, Manuel Arbelo, Susan L. Ustin*

**WEP.G.6** **EVALUATION OF ALGORITHMS AND REMOTE SENSING DATASETS FOR FIRE MAPPING IN CHINA**
*Wu Jianjun, Lü Aifeng*

**WEP.G.7** **MONITORING DEFORESTATION USING REMOTE SENSING OBSERVATIONS AND CHANGE DETECTION METHODS: THE CASE OF CEDAR FOREST DECLINE IN MOROCCO**
*Driss Haboudane, El Mustapha Bahri, Mohamed Qarro, Mohamed Sabir*

**WEP.G.8** **USE OF FORMOSAT-2 SATELLITE IMAGERY TO DETECT NEAR REAL TIME DEFORESTATION IN AMAZONIA**
*Florence Baillarin, Ghislain Gonzales, Carlos Souza*

**WEP.G.9** **IDENTIFICATION OF HURRICANE IMPACTED FOREST AREAS AND SEVERITY USING MODIS MEASUREMENTS**
*Wanting Wang, John Qu, Xianjun Hao, Yongqiang Liu*

**WEP.G.10** **EVIDENTIAL REASONING APPLIED TO MAPPING REGENERATION OF FOREST STAND USING MULTISOURCE GEOSPATIAL DATA**
*Brice Mora, Richard Fournier, Samuel Foucher, Goze B. Bénié, Kim Lowell*

**WEP.G.11** **POLARIMETRIC SAR DATA FOR FOREST AND DEFORESTATION MAPPING IN GUIZHOU PROVINCE, SOUTHWEST OF CHINA**
*Maosong Xu, Fengli Zhang, Zhongsheng Xia, Huaze Gong*

## WEP.H: Wednesday, July 9, 17:00 - 18:30

**WEP.H** **Drought and Evapotranspiration**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area H
Co-Chairs: Rolf Reichle and Valery Mironov

**WEP.H.1** **NORMALIZATION OF MODIFIED PERPENDICULAR DROUGHT INDEX USING AVHRR AND MODIS DATA FOR DROUGHT ASSESSMENT IN CENTRAL AND WESTERN UNITED STATES**
*Abduwasit Ghulam, Alimujiang Kasimu, Tim Kusky*

**WEP.H.2** **DROUGHT MONITORING IN NORTHERN CHINA BASED ON SATELLITE DATA AND LAND SURFACE MODELING**
*Renhua Zhang, Hongbo Su, Paul Houser, Jing Tian, Zhaoliang Li, Shaohui Chen, Jinyan Zhan, Xiangzheng Deng, Xiaomin Sun, Jianjun Wu*

**WEP.H.3** **MONITORING FUEL MOISTURE AND IMPROVING THE PREDICTION OF WILDFIRE POTENTIAL IN BOREAL ALASKA WITH SATELLITE C-BAND IMAGING RADAR**
*Laura Bourgeau-Chavez, Kevin Riordan, Gorden Garwood*

**WEP.H.4** **ESTIMATING LATENT AND SENSIBLE HEAT FLUXES USING THE TEMPERATURE VEGETATION DRYNESS INDEX (TVDI) AND MODIS DATA**
*Monica Garcia, Francisco Fernandez-Abad, Alicia Palacios-Orueta, Francisco Domingo, Luis Villagarcia, Juan Puigdefabregas*

**WEP.H.5** **THE PRELIMINARY APPLICATION OF THE NEW METHOD FOR MONITORING FARMLAND DROUGHT BASED ON N-DIMENSIONAL SPECTRAL FEATURE SPACE---TAKING WHEAT DROUGHT MONITORING IN NING XIA AS AN EXAMPLE**
*Nan Yang, Qiming Qin, Chuan Jin, Yunjun Yao*

**WEP.H.6** **SATELLITE DERIVED EVAPORATION**
*Thomas Holmes, Richard de Jeu, John Gash, Han Dolman, Eleanor Blyth*

**WEP.H.7** **AN IMPROVED METHOD FOR ESTIMATING GLOBAL EVAPOTRANSPIRATION BASED ON SATELLITE DETERMINATION OF SURFACE NET RADIATION, VEGETATION INDEX,TEMPERATURE AND SOIL MOISTURE**
*Kaicun Wang, Shunlin Liang*

**WEP.H.8** **EVALUATING THE POTENTIAL OF VI-LST TRIANGLE MODEL FOR QUANTITATIVE ESTIMATION OF SOIL MOISTURE USING OPTICAL IMAGERY**
*A. K. M. Hossain, Greg Easson*

**WEP.H.9** **CROP DROUGHT MONITORING USING MODIS NDDI OVER MID-TERRITORY OF CHINA**
*Chenglin Liu, Jianjun Wu*

**WEP.H.10** **COMBINING A TWO-SOURCE PATCH MODEL WITH SATELLITE DATA TO MONITOR DAILY EVAPOTRANSPIRATION AT A REGIONAL SCALE**
*Juan Manuel Sánchez, Vicente Caselles, William P. Kustas, Giusy Scavone, Enric Valor, César Coll, María Mira*

**WEP.H.11** **CHARACTERIZING SPATIO-TEMPORAL PATTERNS AND DYNAMICS OF ECOLOGICAL WATER DEMAND FOR VEGETATIONS BY MEANS OF REMOTELY SENSED EVAPOTRANSPIRATION AND SOIL MOISTURE CONDITIONS**
*Chuansheng Liu, Wan-Chang Zhang, Jiongfeng Chen*

## WEP.I: Wednesday, July 9, 17:00 - 18:30

**WEP.I** **Ocean Altimetry**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area I
Co-Chairs: Peter Chu and Jérôme Benveniste

**WEP.I.1** **VARIABILITY IN THE ATLANTIC MERIDIONAL OVERTURNING CIRCULATION AND HEAT TRANSPORT DETECTED REMOTELY FROM ARGO FLOATS**
*Peter C. Chu, Charles Sun, Chenwu Fan*

**WEP.I.2** **SEA LEVEL FROM SPACE: APPLICATIONS OF OCEAN ALTIMETRY DATA**
*Margaret Srinivasan, Robert Leben*

**WEP.I.3** **BASIC RADAR ALTIMETRY TOOLBOX**
*Jérôme Benveniste, Vinca Rosmorduc, Sander Neimeijer, Nicolas Picot*

## WEP.J: Wednesday, July 9, 17:00 - 18:30

**WEP.J** **Atmospheric Profiling III**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area J
Co-Chairs: Gail Skofronick and Vince Leslie

**WEP.J.1** **STUDY OF ATMOSPHERIC CORRECTION IN THE REMOTE SENSING BASED ON A MIE/ RAMAN/DIAL LIDAR SYSTEM AND SUNPHOTOMETER**
*Jinye Zhang, Wei Gong, Jun Li, Feiyue Mao, Rongliang Zeng, Zhenluan Hu, Liangpei Zhang, Pingxiang Li*

**WEP.J.2** **OBSERVATION OF PRECIPITABLE WATER VAPOR USING THE 18TH AND 19TH BAND OF MODIS**
*Xiaoping Gu, Xingming Wang, Zhanping Wu, Pengju Tian*

**WEP.J.3** **OVERVIEW OF RESEARCH AND NETWORKING WITH GROUND BASED REMOTE SENSING FOR ATMOSPHERIC PROFILING AT THE CABAUW EXPERIMENTAL SITE FOR ATMOSPHERIC RESEARCH (CESAR) – THE NETHERLANDS**
*Arnoud Apituley, Herman Russchenberg, Hans van der Marel, Fred Bosveld, Reinout Boers, Harry ten Brink, Gerrit de Leeuw, Remco Uijlenhoet, Bertram Arbresser-Rastburg, Thomas Röckmann*

**WEP.J.4** **VOLUMETRIC GAS MONITORING THROUGH AN IR LASER NETWORK FOR THE CONTROL OF THE GAS EMISSION FLUX BY SENSITIVE AREAS: METHODS AND SIMULATION RESULTS**
*Fabrizio Cuccoli, Luca Facheris*

**WEP.J.5** **VERTICAL VELOCITY TURBULENCE OBSERVED WITH FMCW RADAR**
*Stephen Frasier, Andreas Muschinski, Pei-Sang Tsai, Mario Behn*

**WEP.J.6** **CHANNEL FREQUENCY OPTIMIZATION OF A FUTURE AMSU-B-LIKE MILLIMETER-WAVE RADIOMETER FOR INTEGRATED WATER VAPOR RETRIEVAL IN POLAR REGIONS**
*Haibo Zhao, Jungang Miao*

**WEP.J.7** **PLANETARY BOUNDARY LAYER HEIGHT AND WIND FIELD CHARACTERIZATION BY MEANS OF A LIDAR AT THE TEIDE OBSERVATORY IN THE CANARY ISLANDS**
*Michaël Sicard, Sergio Tomás, Adolfo Comerón, Francesc Rocadenbosch*

**WEP.J.8** **A NOVEL GROUND-BASED MICROWAVE RADIOMETER FOR HIGH PRECISION ATMOSPHERIC OBSERVATIONS BETWEEN 10 AND 90 GHZ**
*Dorle Nörenberg, Susanne Crewell, Ulrich Löhnert, Thomas Rose, Antonio Martellucci*

**WEP.J.9** **A HIGH RESOLUTION FULL EARTH DISK MODEL FOR MICROWAVE ATMOSPHERIC PROFILING FROM GEO**
*Boon Lim, Christopher Ruf, Alan Tanner*

## WEP.K: Wednesday, July 9, 17:00 - 18:30

**WEP.K** **Satellite Data-based Methods for Determining Aerosol Characteristics**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area K
Co-Chairs: John Jackson and Pasquale Sellitto

**WEP.K.1** **FAST AEROSOL OPTICAL DEPTH RETRIEVAL FROM MODIS**
*Jianping Guo, Huadong Xiao, Chunxiang Cao, Yong Xue, Jie Guang, Jianwen Ai, Xiaozhou Xin*

**WEP.K.2** **GRID ENABLED SIMULTANEOUS RETRIEVAL OF AEROSOL AND GROUND SURFACE REFLECTANCE FROM INTEGRATION OF AERONET AND SATELLITE DATA**
*Wei Wan, Yong Xue, Jie Guang, Linyan Bai, Ying Wang, Jianwen Ai, Yinjie Li*

**WEP.K.3** **AN ADVANCED QUANTITATIVE RETRIEVAL ALGORITHM FOR AEROSOL OPTICAL DEPTH OVER LAND FROM TERRA AND AQUA MODIS DATA**
*Yingjie Li, Yong Xue, Wei Wan, Linyan Bai, Jie Guang, Ying Wang*

**WEP.K.4** **REGIONAL QUANTITATIVE RETRIEVAL OF AEROSOL OPTICAL DEPTH USING TERRA AND AQUA MODIS DATA**
*Linyan Bai, Yong Xue, Guang Jie, Ying Wang, Yingjie Li, Wei Wan*

**WEP.K.5** **A NEW STUDY OF DETECTING BIOMASS BURNING EMPLOYING MODIS DATA APPLYING BROADBAND AEROSOL OPTICAL THICKNESS**
*Ying Wang, Yong Xue, Linyan Bai, Wei Wan, Jie Guang, Yingjie Li*

**WEP.K.6** **RETREIVAL OF AEROSOL FROM SPACE-BORNE POLARIMETRIC DATA IN BEIJING**
*Zhongting Wang, Liangfu Chen, Xingfa Gu*

**WEP.K.7** **RETRIEVAL OF SPECTRAL AEROSOL OPTICAL THICKNESS OVER LAND SURFACE FROM MULTI-WAVELENGTH POLARIZATION SPACE-BORNE SENSORS**
*Xinli Hu, Liangfu Chen, Xingfa Gu*

**WEP.K.8** **RETRIEVAL OF AEROSOL FROM CBERS02 USING CONTRAST REDUCTION METHOD IN BEIJING**
*Ying Zhang, Zhongting Wang, Liangfu Chen, Xingfa Gu*

**WEP.K.9** **AN APPROACH FOR AEROSOL RETRIEVALS OVER CANADA'S LANDMASS FROM HISTORICAL AVHRR 1-KM OBSERVATIONS**
*Alexander Radkevich, Alexander Trishchenko*

**WEP.K.10** **ESTIMATION OF OPTICAL PROPERTIES OF ASIAN DUST OVER THE LAND SURFACE BY POLARIZATION MEASUREMENTS**
*Takashi Kusaka, Hiroto Kitaguchi*

**WEP.K.11** **COMPARISON OF AIRS, SBUV2 AND OMI OZONE MEASUREMENTS**
*Xianjun Hao, John Qu*

## WEP.L: Wednesday, July 9, 17:00 - 18:30

**WEP.L** **Aerosol and Trace Gas Monitoring using a Combination of Ground-based and Satellite Observations**

Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area L
Co-Chairs: Hongqing Liu and Eric Vermote

**WEP.L.1** **WEEKDAY AND SEASONAL VARIATIONS IN NO2 IN SOUTHERN ONTARIO, CANADA USING DATA FROM THE OZONE MONITORING INSTRUMENT (OMI)**
*Julie Wallace, Pavlos Kanaroglou*

**WEP.L.2** **RETRIEVAL OF AEROSOL OPTICAL PROPERTIES BASED ON MEASUREMENTS OF LIDAR, SUN-PHOTOMETER, AND CALIPSO AT WUHAN, CHINA**
*Jun Li, Wei Gong, Yingying Ma, Zhongmin Zhu, Pingxiang Li, Liangpei Zhang*

**WEP.L.3** **VALIDATION AND UNDERSTANDING OF MODERATE RESOLUTION IMAGING SPECTRORADIOMETER (MODIS) COLLECTION 005 AEROSOL PRODUCTS USING THE AEROSOL ROBOTIC NETWORK (AERONET) GROUND-BASED DATA IN CHINA**
*Chunyan Zhou, Qinhuo Liu, Yong Tang, Lin Sun, Xiaozhou Xin*

**WEP.L.4** **AEROSOL RETRIEVAL AND IMPROVED SURFACE ALBEDO OVER URBAN SCENES USING COMBINED MODIS AND SUNPHOTOMETER MEASURMENTS**
*Min Oo, Matthias Jerg, Eduardo Hernandez, Julia He, Barry Gross, Fred Moshary, Samir Ahmed*

**WEP.L.5** **ANALYSIS OF CLIMATIC CHARACTERISTICS AND INFLUENCING FACTORS OF SAND-DUST EVENTS IN NORTHWEST CHINA**
*Jianhong Tao, Jinsong Wang, Feng Wei*

**WEP.L.6** **IMPROVEMENT OF AEROSOL RETRIEVAL THROUGH CLOUD IDENTIFICATION**
*Yingying Ma, Wei Gong, Jun Li, Liangpei Zhang, Pingxiang Li*

## WEP.M: Wednesday, July 9, 17:00 - 18:30

**WEP.M** **Data Fusion IV**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area M
Co-Chairs: Jocelyn Chanussot and Pieter Kempeneers

**WEP.M.1** **DATA FUSION OF DIGITAL CAMERA AND LIDAR DATA FOR CLASSIFICATION OF DUNE VEGETATION**
*Pieter Kempeneers, Bart Deronde, Sam Provoost*

**WEP.M.2** **SAR IMAGE FUSION IN MULTI SENSOR CONTEXT FOR SMALL URBAN AREA DETECTION**
*Christophe Gouinaud*

**WEP.M.3** **OBJECT-ORIENTED CLASSIFICATION FOR CHANGE DETECTION WITH DIFFERENT SPATIAL RESOLUTION IMAGES**
*Yongdae Gweon, Yun Zhang*

**WEP.M.4** **MULTISCALE INTEGRATION FOR SPATIO-TEMPORAL ECOCLIMATIC ECOREGIONING DELINEATION**
*Didier Leibovici, Mike Jackson*

**WEP.M.5** **FUSION OF HIGH RESOLUTION POLARIMETRIC SAR AND MULTI-SPECTRAL OPTICAL DATA FOR PRECISION VITICULTURE**
*Alessandro Burini, Domenico Solimini, Giovanni Schiavon*

**WEP.M.6** **BINARY CLASSIFICATION STRATEGIES FOR MAPPING URBAN LAND COVER WITH ENSEMBLE CLASSIFIERS**
*Jonathan Cheung-Wai Chan, Luca Demarchi, Tim Van de Voorde, Frank Canters*

**WEP.M.7** **THE EFFECT OF LANDSCAPE PATTERNS ON THE ACCURACY OF LAND COVER MAP FROM MULTI-RESOLUTION REMOTE SENSING DATA CLASSIFICATION**
*Yanchen Bo, Danxia Song*

**WEP.M.8** **LAND-COVER CLASSIFICATION OF HYPERTEMPORAL DATA USING ENSEMBLE SYSTEMS**
*Thomas Udelhoven, Björn Waske, Sebastian van der Linden, Sonia Heitz*

**WEP.M.9** **MULTISOURCE DATA CLASSIFICATION USING A HYBRID SEMI-SUPERVISED LEARNING SCHEME**
*Ranga Vatsavai, Budhendra L. Bhaduri, Shashi Shekhar, Thomas Burk*

**WEP.M.10** **DATA FUSION OF VERY HIGH RESOLUTION SAR AND OPTICAL DATA FOR URBAN LAND-USE CLASSIFICATION**
*Marco Chini, Fabio Pacifici, William J. Emery*

**WEP.M.11** **SPECTRAL MAGNITUDE AND SPECTRAL DERIVATIVE FEATURE FUSION FOR IMPROVED CLASSIFICATION OF HYPERSPECTRAL IMAGES**
*Begüm Demir, Sarp Ertürk*

## WEP.N: Wednesday, July 9, 17:00 - 18:30

**WEP.N** **Data Mining Tools & Applications**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area N
Co-Chairs: Surya Durbha and James Tilton

**WEP.N.1** **DETECTION OF ANOMALOUS ENVIRONMENTAL ELECTROMAGNETIC WAVE BY STATISTICAL PROPERTY IN MAGNETIC FIELD AZIMUTH**
*Tokiyasu Sato, Ichi Takumi, Masayasu Hata, Hiroshi Yasukawa*

**WEP.N.2** **FLOW MODEL AND ITS APPLICATION IN 3DGIS**
*Hua Xu, Qiang Wu, Peng Zhao, Chao Han, Wenyu Zhang*

**WEP.N.3** **STORAGE AND RETRIEVAL OF MOTION DATA FOR MOVING OBJECTS IN 3D GIS**
*Huanzhuo Ye*

**WEP.N.4** **SPATIAL DATA INFRASTRUCTURE DEVELOPMENT OF RUSSIAN SATELLITE DATA FOR GLOBAL MONITORING AND DISASTER MANAGEMENT SUPPORT**
*Efim Kudashev*

**WEP.N.5** **THE OPTIMIZATION OF REMOTE SPATIAL JOIN QUERIES ON SPATIAL INFORMATION GRID**
*Chuanjie Xie, Gaohuan Liu, Bingbo Gao, Wentao Sheng*

**WEP.N.6** **PARALLEL COORDINATE PLOT: AN APPLICATION TO VISUALIZE THE UNCERTAINTY IN THEMATIC CLASSIFICATIONS OF REMOTELY SENSED IMAGERY**
*Yong Ge, Sanping Li*

**WEP.N.7** **DESIGN AND IMPLEMENTATION OF MANAGEMENT INFORMATION SYSTEM OF GRAND CANAL OF CHINA**
*Wensheng Zhou, Feng Mao, Zhihua Tang, Weijun Sun*

## WEP.O: Wednesday, July 9, 17:00 - 18:30

**WEP.O** **Ensemble Filtering and Data Assimilation**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area O
Co-Chairs: Kazumasa Aonashi and Ralf Bennartz

**WEP.O.1** **COMBINING REMOTE SENSING MEASUREMENTS AND MODEL ESTIMATES THROUGH HYBRID DATA ASSIMILATION SCHEME TO PREDICT HYDROLOGICAL FLUXES AT A WATERSHED SCALE**
*Baburao Kamble, Ayse Irmak*

**WEP.O.2** **MODELING AND ASSIMILATION OF REGIONAL ACTUAL EVAPOTRANSPIRATION USING THE ESSI DISTRIBUTED HYDROLOGICAL MODEL WITH ENSEMBLE KALMAN FILTER**
*Dengzhong Zhao, Wan-Chang Zhang, Jiongfeng Chen*

**WEP.O.3** **GLOBAL SENSITIVITY ANALYSIS (GSA) MEASURES THE QUALITY OF PARAMETER ESTIMATION. CASE OF SOIL PARAMETER ESTIMATION WITH A CROP MODEL.**
*Hubert-Vincent Varella, Martine Guérif, Samuel Buis*

**WEP.O.4** **ESTIMATING THE SPATIAL EXCHANGE OF CARBON THROUGH THE ASSIMILATION OF EARTH OBSERVATION (EO) DERIVED PRODUCTS USING AN ENSEMBLE KALMAN FILTER**
*Martin De Kauwe, Tristan Quaife, Philip Lewis, Mathias Disney, Mathew Williams*

**WEP.O.5** **OPTIMAL SPECTRAL DECOMPOSITION (OSD) FOR REMOTELY SENSED OCEAN DATA ASSIMILATION**
*Peter C. Chu*

**WEP.O.6** **ESTIMATION OF REGIONAL SOIL MOISTURE BY ASSIMILATING MULTI-SENSOR PASSIVE MICROWAVE REMOTE SENSING OBSERVATIONS BASED ON ENSEMBLE KALMAN FILTER**
*Chunlin Huang, Xin Li, Juan Gu*

**WEP.O.7** **VEGETATION ISOLINE EQUATIONS WITH HIGHER ORDER INTERACTION TERMS TO IMPROVE ACCURACY IN RETRIEVAL OF VEGETATION BIOPHYSICAL PARAMETERS**
*Munenori Miura, Hiroki Yoshioka*

**WEP.O.8** **A SIMPLIFIED DATA ASSIMILATION METHOD FOR RECONSTRUCTING TIME-SERIES MODIS NDVI DATA**
*Juan Gu, Xin Li, Chunlin Huang*

**WEP.O.9** **LAI RETRIEVAL FROM CYCLOPES AND MODIS PRODUCTS USING ARTIFICIAL NEURAL NETWORKS**
*Linna Chai, Yonghua Qu, Lixin Zhang, Jindi Wang*

**WEP.O.10** **SPATIAL CORRELATION PATTERNS OF L-BAND MICROWAVE BRIGHTNESS TEMPERATURE**
*Xujun Han, Xin Li, Rui Jin, Shuguo Wang*

**WEP.O.11** **STUDY ON ENVISAT ASAR DATA ASSIMILATION IN RICE GROWTH MODEL FOR YIELD ESTIMATION**
*Shenbin Yang, Shuanghe Shen, Bingbai Li, Bingxiang Tan, Thuy Le Toan*

## WEP.P: Wednesday, July 9, 17:00 - 18:30

**WEP.P** **Inverse Methods and Data Processing**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area P
Co-Chairs: Bob Weisenseel and Rolando Raqueno

**WEP.P.1** **MULTIPLE PASS METRIC-BASED AUTOFOCUS FOR 3D SAR IMAGING**
*Forest Lee-Elkin*

**WEP.P.2** **PHASE COMPONENTS ANALYSIS OF PERMANENT SCATTERERS INSAR TECHNIQUE**
*Wenliang Jiang, Jingfa Zhang*

**WEP.P.3** **NAER FIELD IMAGING OF SYNTHETIC APERTURE RADIOMETER**
*Cheng Zhang, Ji Wu, Hao Liu, Weiying Sun, Jingye Yan*

**WEP.P.4** **CART-BASED RARE HABITAT INFORMATION EXTRACTION FOR LANDSAT ETM+ IMAGE**
*Zili Zhang, Qiming Qin, Junping Gao, Yuzhi Dong, Yunjun Yao, ZhaoQiang Wang, FanWei Dai*

**WEP.P.5** **QUANTATIVE INVERSION BASED ON HYPERSPECTRAL DATA FOR SOIL SALINIZATION IN THE ECOLOGICAL CORRIDOR OF TARIM RIVER, XINJIANG, CHINA**
*Cun Chang, Xi Chen, Anming Bao, Geping Luo*

**WEP.P.6** **CASE STUDIES IN HIGH THROUGHTPUT COMPUTING (HTC) USING CONDOR FOR PHYSICS-BASED REMOTE SENSING ALGORITHM DEVELOPMENT AND APPLICATION**
*Rolando Raqueno, Robert Krzaczek*

**WEP.P.7** **COMPARISON BETWEEN THE KALMAN AND THE NON-LINEAR LEAST-SQUARES ESTIMATORS IN LOW SIGNAL-TO-NOISE RATIO LIDAR INVERSION**
*Francesc Rocadenbosch, Michaël Sicard, Adolfo Comerón, M. N. Md. Reba, Adriano Camps*

**WEP.P.8** **COMPARISON OF ALTERNATIVE MARKOV MODELS FOR SEA FLOOR GRAIN SIZE INTERPOLATION AND ESTIMATION**
*Robert Weisenseel, Ssu-Hsin Yu*

**WEP.P.9** **PRECISE EVALUATION OF TOPOGRAPHIC EFFECTS IN SATELLITE IMAGERY FOR ILLUMINATION CORRECTION**
*Yoshikazu Iikura*

**WEP.P.10** **AN IMPROVED ALGORITHM TO PRODUCE SPATIO-TEMPORALLY CONTINUOUS MODIS ALBEDO PRODUCT IN CHINA**
*Tao He, Zhiqiang Xiao, Jindi Wang*

**WEP.P.11** **THE BIDIRECTIONAL REFLECTANCE SIGNATURE OF TYPICAL LAND SURFACES AND COMPARISON OF MISR AND MODIS BRDF PRODUCTS**
*Yongmei Chen, Jindi Wang, Shunlin Liang, Dongwei Wang, Bin Ma, Yanchen Bo*

## WEP.Q: Wednesday, July 9, 17:00 - 18:30

**WEP.Q** **Statistical and Physics-Based Inverse Methods**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Q
Co-Chairs: Edwin Marengo and Paul Siqueira

**WEP.Q.1** **INVERSE SCATTERING OF EXTENDED TARGETS BY SIGNAL SUBSPACE APPROACHES AND THE LEVEL SET METHOD**
*Fred Gruber, Edwin Marengo*

**WEP.Q.2** **AN INVERSE SCATTERING METHOD BASED ON LAMÉ CURVES FOR IMAGING BURIED CRACKS AND VOIDS**
*Lorenzo Crocco, Michele D'Urso, Tommaso Isernia*

**WEP.Q.3** **VELOCITY UNFOLDING IN NETWORKED RADAR SYSTEM**
*Edin Insanic, Paul Siqueira*

**WEP.Q.4** **WELL LOG DATA INVERSION USING HIGHER ORDER NEURAL NETWORKS**
*Kou-Yuan Huang, Liang-Chi Shen, Chun-Yu Chen*

**WEP.Q.5** **PERFORMANCE OF 3D CANONICAL SHAPE FEATURE EXTRACTION FROM BISTATIC RADAR**
*Julie Ann Jackson, Randolph Moses*

**WEP.Q.6** **AN IMAGING APPROACH FOR INTRAWALL INSPECTIONS**
*Ilaria Catapano, Lorenzo Crocco*

**WEP.Q.7** **MODELLING THE ERROR STATISTICS IN SUPPORT VECTOR REGRESSION OF SURFACE TEMPERATURE FROM INFRARED DATA**
*Gabriele Moser, Sebastiano Serpico*

**WEP.Q.8** **SAHELIAN-GRASSLAND PARAMETER ESTIMATION FROM BACKSCATTERED RADAR RESPONSE**
*Alejandro Monsivais-Huertero, Isabelle Chenerie, Kamal Sarabandi*

**WEP.Q.9** **USE OF VECTOR VELOCITY ESTIMATE ACCURACY FOR IMPROVED RESOURCE ALLOCATION IN A NETWORK OF RADARS**
*Edin Insanic, Paul Siqueira*

**WEP.Q.10** **INVERSION OF BACKSCATTER IONOGRAMS OPTIMISATION BY USING SIMULATED ANNEALING AND GENETIC ALGORITHMS**
*Eulàlia Benito, Alain Bourdillon, Stéphane Saillant, Jean-Philippe Molinié, Véronique Rannou*

**WEP.Q.11** **SEMI-SUPERVISED SUPPORT VECTOR BIOPHYSICAL PARAMETER ESTIMATION**
*Gustavo Camps-Valls, Jordi Munoz-Mari, Luis Gomez-Chova, Javier Calpe-Maravilla*

**WEP.Q.12** **SENSITIVITY ANALYSIS OF THE SIMULATED ANNEALING METHOD TO MEASUREMENT NOISE FOR THE INVERSION OF SUBSURFACE PARAMETERS OF TWO LAYER ROUGH SURFACES**
*Alireza Tabatabaeenejad, Mahta Moghaddam*

## WEP.R: Wednesday, July 9, 17:00 - 18:30

**WEP.R** **SAR Image Methods**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area R
Co-Chairs: Samuel Foucher and Florence Tupin

**WEP.R.1** **APPLICATION OF SPATIAL SPECTRUM ESTIMATION TECHNIQUE IN MULTIBASELINE SAR FOR LAYOVER SOLUTION**
*Bin Wang, Yan-Ping Wang, Wen Hong, Yirong Wu*

**WEP.R.2** **THE EFFECTS OF FINITE RESOLUTION ON RADAR IMAGES OF FRACTAL PROFILES**
*Gerardo Di Martino, Antonio Iodice, Daniele Riccio, Giuseppe Ruello*

**WEP.R.3** **REGION FEATURE EXTRACTION BASED ON IMPROVED REGULARIZATION METHOD IN SAR IMAGE**
*Feng Xu, Shirong Chen, Yida Fan, Chao Wang*

**WEP.R.4** **AUTOMATED DETECTING IMAGE CONTROL POINTS FROM SAR IMAGERY BASED ON DATABASE OF OPTICAL IMAGE PATCHES**
*Hui Long, Kun Fu, Hongqi Wang, Chuanzhao Han, Wudi Wang*

**WEP.R.5** **ON THE MODEL OF OPTIMUM DATA VECTOR FOR MULTIBASELINE SAR INTERFEROMETRY PHASE UNWRAPPING**
*Zhijie Mao, Guisheng Liao*

**WEP.R.6** **ANALYSIS OF SAR SPECKLE NOISE STATISTICS TO SUPPORT IMAGE FILTERING AND INTERPRETATION**
*Andreas Schenk, Thomas Esch, Achim Roth, Stefan Dech*

**WEP.R.7** **COMBINED WAVELET AND CONTOURLET DENOISING OF SAR IMAGES**
*Johannes R. Sveinsson, Jón Atli Benediktsson*

**WEP.R.8** **MOTION COMPENSATION PROCESSING OF AIRBORNE SAR DATA**
*Pietro Guccione, Ciro Cafforio*

**WEP.R.9** **SPECKLE REDUCTION OF SAR IMAGES IN THE BANDLET DOMAIN**
*Johannes R. Sveinsson, Zohra Semar, Jón Atli Benediktsson*

**WEP.R.10** **UNSUPERVISED CHANGE DETECTION IN SAR IMAGE USING GRAPH CUTS**
*Chen Keming, Huo Chunlei, Zhou Zhixin, Lu Hanqing*



## WEP.S: Wednesday, July 9, 17:00 - 18:30

**WEP.S** **SAR Instruments, Missions and Atmospheric Effects**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area S
Co-Chairs: Jorgen Dall and Evert Attema

**WEP.S.1** **TRANSPONDER WITH UNDERSAMPLING METHOD**
*Wang Yiding*

**WEP.S.2** **A NEW STAR IDENTIFICATION ALGORITHM BASED ON MATCHING PROBABILITY**
*Junfeng Xie, Wanshou Jiang, Jianya Gong*

**WEP.S.3** **EXTRACTION OF ATMOSPHERIC PATH DELAYS FROM SAR DATA**
*Michael Jehle, David Small, Erich Meier*

**WEP.S.4** **COMPARISON OF ATMOSPHERIC PHASE DELAY ON ALOS PALSAR INTERFEROGRAM AND CLOUD DISTRIBUTION PATTERN ON SIMULTANEOUSLY OBSERVED AVNIR-2 IMAGES**
*Chinatsu Yonezawa, Tsutomu Yamanokuchi, Nobuhiro Tomiyama, Yoshinari Oguro*

**WEP.S.5** **RAIN IMPACT ON SENSITIVITY OF KA-BAND SCAN-ON-RECEIVE SYNTHETIC APERTURE RADARS**
*Salvatore D'Addio, Michael Ludwig*

## WEP.T: Wednesday, July 9, 17:00 - 18:30

**WEP.T** **Moving and Stationary Targets**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area T
Co-Chairs: Paul Kersten and Shen Chiu

**WEP.T.1** **A NEW SAR-GMTI METHOD FOR FOUR PHASE CENTERS ON TWO SATELLITES FLYING IN CLOSE FORMATION**
*Bin Cai, Diannong Liang, Zhen Dong, Anxi Yu*

**WEP.T.2** **ROBUST MOVING TARGET DETECTION AND PARAMETER ESTIMATION BASED ON THREE-CHANNEL SAR IMAGES**
*Zhengguang Zhou, Guisheng Liao, Shengqi Zhu*

**WEP.T.3** **MOVING TARGET DETECTION IN ALONG TRACK SAR INTERFEROMETRY FROM IN-PHASE AND QUADRATURE COMPONENTS DATA**
*Alessandra Budillon, Vito Pascazio, Gilda Schirinzi*

**WEP.T.4** **DOPPLER PARAMETER ESTIMATION FOR SINGLE-CHANNEL SAR MOVING TARGET BASED ON A NOVEL MODEL IN COMPLEX IMAGE DOMAIN**
*Yu Zuo, Jia Xu, Yingning Peng*

**WEP.T.5** **COMPUTATION OF OPTIMUM AZIMUTH SAMPLING TIME FOR DUAL-CHANNEL DPCA SYSTEM BASED ON SIGNAL-TO-NOISE RATIO**
*Li Linlin, Li Jingwen*

**WEP.T.6** **MOVING TARGETS DETECTION AND ANALYSIS ON MULTI-LOOK POLARIMETRIC SAR IMAGES USING PWF METHOD**
*Bin Zou, Tao Wei, Lamei Zhang*

**WEP.T.7** **A NEW METHOD OF SAR IMAGE TARGET RECOGNITION BASED ON ADABOOST ALGORITHM**
*Wei Guo, Qingwen Qi, Lili Jiang, Ping Zhang*

**WEP.T.8** **GMTI PERFORMANCE ANALYSIS FOR CIRCULAR SCANNING SAR EQUIPPED ON SLOW PLATFORM**
*Bing Sun, Yinqing Zhou, Jie Chen*



## WEP.U: Wednesday, July 9, 17:00 - 18:30

**WEP.U** **Multistatic SAR and 3-D Imaging**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area U
Chair: Gianfranco Fornaro

**WEP.U.1** **COMPENSATION OF THE RANGE VARIANT BISTATIC DEFORMATION TERM FOR LBF**
*Kefeng Yang, Feng He, Diannong Liang*

**WEP.U.2** **INFLUENCE AND DEPENDENT PARAMETERS OF TERRAIN UNDULATION TO BISTATIC SAR IMAGING**
*Xiaolan Qiu, Donghui Hu, Chibiao Ding, Daojing Li*

**WEP.U.3** **RESOLUTION ANALYSIS FOR BISTATIC SYNTHETIC APERTURE RADAR**
*Yuanyao Lu, Jingzhang Wang*

**WEP.U.4** **A SYNTHESIZED PERFORMANCE EVALUATION FOR DISTRIBUTED SPACEBORNE INSAR SYSTEM**
*Jiying Liu, Haifeng Huang, Yongsheng Zhang, Jubo Zhu*

**WEP.U.5** **SYNCHRONIZATION OF GEO SPACEBORNE-AIRBORNE BISTATIC SAR**
*Ling Lei, Yinqing Zhou, Jingwen Li, Jie Chen, Weigang Zhu*

**WEP.U.6** **3-D RANGE STACKING ALGORITHM FOR FORWARD-LOOKING SAR 3-D IMAGING**
*Weixian Tan, Wen Hong, Yan-Ping Wang, Yi-Rong Wu*

**WEP.U.7** **IMAGING GEOMETRY ANALYSIS OF 3D SAR USING LINEAR ARRAY ANTENNAS**
*Yan-Ping Wang, Bin Wang, Wen Hong, Lei Du, Yirong Wu*

## WEP.V: Wednesday, July 9, 17:00 - 18:30

**WEP.V** **Urban Remote Sensing I**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area V
Co-Chairs: Fumio Yamazaki and Anne Lise Chesnel

**WEP.V.1** **REVEALING INTRA-URBAN FEATURES USING OPTICAL AND SAR IMAGES**
*Yasuyo Makido, Yoshiki Yamagata, Shobhakar Dhakal*

**WEP.V.2** **URBAN LAND USE CHANGE OF NANJING, CHINA, USING MULTITEMPORAL SATELLITE DATA**
*Chang-Qing Ke*

**WEP.V.3** **HOW DO PEOPLE PERCEIVE THE CITY'S GREEN SPACE? A VIEW FROM SATELLITE IMAGERY (IN HANOI, VIETNAM)**
*Thi Thanh Hien Pham, Dong-Chen He*

**WEP.V.4** **RESEARCH ON THE URBAN FABRIC OF WUHAN BASED ON GIS AND MAS**
*Xiang Huali, Ye Huanzhuo*

**WEP.V.5** **MEASUREMENT OF URBAN ECOLOGICAL COMPENSATION FROM IKONOS DATA**
*Taiyang Zhong, Xiuying Zhang, Weiguo Wang, Xianjin Huang*

**WEP.V.6** **EVALUATING INFLUENCES OF ZONING TO URBAN ECOLOGICAL PARAMETERS WITH REMOTE SENSING**
*Taiyang Zhong, Xiuying Zhang, Weiguo Wang, Xianjin Huang*

**WEP.V.7** **URBAN CHANGE DETECTION BASED ON LOCAL FEATURES AND MULTISCALE FUSION**
*Chunlei Huo, Zhixin Zhou, Jian Cheng, Hanqing Lu, Keming Chen*

**WEP.V.8** **RESEARCH ON CURRENT SITUATION INVESTIGATION BY REMOTE SENSING AND DIVISION PROTECTION ZONE OF GREAT WALL OF MING DYNASTY IN BEIJING**
*Ou Zhang, Xiaojuan Li, Huili Gong, Weiguang Zhang, Yonghua Sun*

**WEP.V.9** **A GLOBAL COMPARATIVE ANALYSIS OF URBAN SPATIO-TEMPORAL DYNAMICS DURING THE LAST FOUR DECADES USING COURSE RESOLUTION REMOTE SENSING DATA AND GIS**
*Alimujiang Kasimu, Abduwasit Ghulam, Ryutaro Tateishi*

**WEP.V.10** **SENSITIVITY OF SPATIAL INDICATORS FOR URBAN TERRAIN CHARACTERIZATION**
*Nathalie Long, Erwan Bocher, Thomas Leduc, Guillaume Moreau*

**WEP.V.11** **USING NODE TO IMPROVE THREE-DIMENSIONAL PATH FINDING SOLUTION**
*Lei Niu, Guobin Zhu*

**WEP.V.12** **DAMAGE ASSESSMENT ON BUILDINGS USING MULTISENSOR MULTIMODAL VERY HIGH RESOLUTION IMAGES AND ANCILLARY DATA**
*Anne-Lise Chesnel, Renaud Binet, Lucien Wald*

## WEP.W: Wednesday, July 9, 17:00 - 18:30

**WEP.W** **Urban Remote Sensing II**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area W
Co-Chairs: Fumio Yamazaki and Anne Lise Chesnel

**WEP.W.1** **DETECTION AND CHARACTERISATION OF URBAN OBJECTS FROM VHR OPTICAL IMAGE DATA**
*Alan Steel, Dominik Brunner*

**WEP.W.2** **URBANIZATION AND ITS INFLUENCE ON STREAM HEALTH: RESULTS FROM THE MID-ATLANTIC AND SOUTHERN NEW ENGLAND USA**
*Scott Goetz, Greg Fiske*

**WEP.W.3** **RESEARCH ON MONITORING,EVALUATION AND ADJUSTMENT MODELS ABOUT REGIONAL ECOLOGICAL SECURITY**
*Xiuping Zou, Qingwen Qi*

**WEP.W.4** **STORM WATER RUNOFF: EFFECTS OF CHANGES IN IMPERVIOUS SURFACES**
*Tahmina Shirmeen, Greg Easson*

**WEP.W.5** **COMPARISON OF EXTRACTING RURAL RESIDENTIAL AREA FROM SATELLITE IMAGES WITH MULTIRESOLUTION**
*Cunjian Yang, Xiaoyan Wang, He Huang*

**WEP.W.6** **A FLOOD HAZARD RISK ASSESSMENT MAP IN GROWING URBAN AREAS BY INTEGRATING REMOTE SENSING AND DEM DATA**
*Vincent De Paul Onana, Jean-Paul Rudant, Emmanuel Trouvé, Gilles Mauris, Nadine T. Laporte, Wayne Walker*

**WEP.W.7** **CNGI BASED RESOURCE & ENVIRONMENT DECISION SERVICE SYSTEM FOR LANCANG-MEKONG SUB-REGION SECURITY**
*Qingwen Qi, Qiao Guo, Lili Jiang, An Zhang, Zhaiwei Chen, Li Xu, Zhangbao Ma*

**WEP.W.8** **ADVANCED DISPLACEMENT ESTIMATION FOR PSI USING HIRES SAR DATA**
*Stefan Gernhardt, Stefan Hinz, Richard Bamler*

**WEP.W.9** **EVALUATION OF URBAN ENVIRONMENTAL QUALITY WITH HIGH RESOLUTION SATELLITE IMAGES**
*Meichun Yan, Xiufeng He, Wengang Sang*

**WEP.W.10** **SUB-PIXEL STEREO-MATCHING FOR DEM GENERATION FROM NARROW BASELINE STEREO IMAGERY**
*Gareth Morgan, Jian Guo Liu, Hongshi Yan*

**WEP.W.11** **CHARACTERIZING THE MESO-SCALE ENVIROMENTAL THERMAL EFFECTS DUE TO DIFFERENT LANDUSE TYPES USING REMOTE SENSING TECHNIQUES AND INDICES IN TAOYUAN, NORTH TAIWAN**
*Chia-Kai Yang, Chih-Hung Tan, Chung-Hsin Juan, Meng-Lung Lin*

**WEP.W.12** **RESEARCH ON URBAN THERMAL FIELD OF LANZHOU CITY IN SUMMER BASED ON GIS**
*Guodong Li, Junhua Zhang*

## WEP.X: Wednesday, July 9, 17:00 - 18:30

**WEP.X** **Urban Remote Sensing III**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area X
Chair: Frans van den Bergh

**WEP.X.1** **DSM GENERATION OF BUILDINGS BASED ON CORRESPONDING OBJECT CONSTRAINT**
*Xinyi Shen, Qiming Qin, Haijian Ma*

**WEP.X.2** **A FIELD-BASED DATABASE MANAGEMENT METHOD FOR CITY AIR POLLUTANTS INFORMATION SYSTEM**
*Fengru Huang, Xuesong Wang, Bin Chen, Yu Fang*

**WEP.X.3** **RESEARCH AND APPLICATION OF SPATIAL INFORMATION TECHNOLOGY ON GRAND CANAL OF CHINA**
*Feng Mao, Ze Liu, Wensheng Zhou, Jianxi Huang, Qiang Li*

**WEP.X.4** **TEMPORAL ANALYSIS OF LAND SURFACE TEMPERATURE IN BEIJING UTILIZING REMOTE SENSING IMAGERY**
*Chudong Huang, Yun Shao, Jinsong Chen, Jinghui Liu, Jing Li*

**WEP.X.5** **A COMPARISON OF TEXTURE FEATURE ALGORITHMS FOR URBAN SETTLEMENT CLASSIFICATION**
*Leonce P. Abeigne Ella, Frans van den Bergh, Barend J. van Wyk, M. Antonie van Wyk*

**WEP.X.6** **VISUALIZATION AND PHOTO-REALISTIC RENDERING OF URBAN BUILDINGS WITH LIDAR DATA AND AREIAL PHOTOS**
*Hongjoo Park, Samsung Lim*

**WEP.X.7** **APPLICATION OF GEO-SPATIAL INFORMATION TECHNOLOGY IN THE ENGINEERING MANAGE OF ROLLER COMPACTION CONSTRUCTION**
*Jian Zhang, Xiaoling Chen*

**WEP.X.8** **RAPID EARTHQUAKE DAMAGE DETECTION USING HIGH-RESOLUTION REMOTE SENSING IMAGES**
*Fujun Zhao, Rui Yan, Zhihui Li, Jingfa Zhang*

**WEP.X.9** **SURFACE DEFORMATION RETRIEVAL OF YANCHENG CITY(CHINA) BASED ON SMALL BASELINE DINSAR TECHNIQUE**
*Hong Zhang, Hong'an Wu, Chao Wang, Tao Wu, Yixian Tang*

**WEP.X.10** **SUBSIDENCE MONITORING USING ASCENDING AND DESCENDING SAR DATA BASED ON COHERENT PIXEL INTERFEROMETRY**
*Yixian Tang, Hong Zhang, Chao Wang, Tao Wu, Hong'an Wu*

**WEP.X.11** **APPLICATION OF WAVELET TRANSFORM ON SEISMIC IMAGE PROCESSING**
*Lei Zhang, Jingfa Zhang, Fujun Zhao, Shan Cai*

## WEP.Z: Wednesday, July 9, 17:00 - 18:30

**WEP.Z** **Remote Sensing of Road Networks and Vehicles**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Z
Co-Chairs: Fumio Yamazaki and Anne Lise Chesnel

**WEP.Z.1** **TRAFFIC SPATIAL MEASURES AND INTERPRETATION OF ROAD NETWORK USING AERIAL REMOTELY SENSED DATA**
*Daiyong Wei, Guoqing Zhou*

**WEP.Z.2** **USE OF HYPERSPECTRAL AND HIGH SPATIAL RESOLUTION IMAGE DATA IN AN ASPHALTED URBAN ROAD EXTRACTION**
*Marcos Resende, Silvio Jorge, George Longhitano, José Alberto Quintanilha*

**WEP.Z.3** **OPTIMIZATION OF GROUND PENETRATING RADAR (GPR) MIXTURE MODEL IN ROAD PAVEMENT DENSITY DATA ANALYSIS**
*Helmi Zulhaidi Mohd Shafri, Raja Syamsul Azmir Raja Abdullah, Mardeni Roslee, Ratnasamy Muniandy*

**WEP.Z.4** **EFFECTIVENESS OF 2D FDTD GROUND PENETRATING RADAR MODELING FOR BRIDGE DECK DETERIORATION EVALUATED BY 3D FDTD**
*He Zhan, Kim Belli, Sara Wadia-Fascetti, Carey Rappaport*

**WEP.Z.5** **AUTOMATED EXTRACTION OF VEHICLES AND THEIR SPEEDS FROM DIGITAL AERIAL IMAGES**
*Fumio Yamazaki, Wen Liu, T. Thuy Vu*

**WEP.Z.6** **A FRAMEWORK TO MONITOR VEHICLE VISUALIZED AND INTUITIVELY BASED ON X3D**
*Jihua Hu, Hao Liu*



## WEP.AA: Wednesday, July 9, 17:00 - 18:30

**WEP.AA** **Remote Sensing of Urban Heat Islands**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area AA
Chair: Frans van den Bergh

**WEP.AA.1** **QUANTITATIVE MEASUREMENT OF URBAN HEAT ISLAND (UHI) BASED ON REMOTE SENSING IMAGERY: INTEGRATING UHI MAGNITUDE AND FOOTPRINT**
*Ji Zhou, Yunhao Chen, Jing Li*

**WEP.AA.2** **VEGETATION COVERAGE AND LAND SURFACE TEMPERATURE RELATIONSHIP FOR QUANTITATIVE ANALYSES OF URBAN HEAT ISLAND**
*Wei Ma, Yunhao Chen, Ji Zhou*

**WEP.AA.3** **EXPERIMENTAL PRODUCTION OF HEAT-ISLAND MAP WITH SATELLITE AND AIRBORNE THERMAL INFRARED DATA**
*Naoki Takagi, Akira Hoyano, Akinobu Murakami, Tsuneo Matsunaga*

**WEP.AA.4** **COMPARATIVE ANALYSIS OF URBAN HEAT ISLAND AND ASSOCIATED LAND COVER CHANGE BASED IN SUZHOU CITY USING LANDSAT DATA**
*Yongming Xu, Zhihao Qin, Yansong Bao*

**WEP.AA.5** **CALCULATION OF CORRIDOR STRUCTURE EFFECT ON URBAN HEAT ISLAND USING HIGHLY SPATIAL RESOLUTION SATELLITE IMAGES IN BEIJING, CHINA**
*Mingyi Du, Weixian Sun, Guoyin Cai*

**WEP.AA.6** **ANALYSIS OF AN URBAN HEAT SINK USING THERMAL INERTIA MODEL FROM ASTER DATA IN BEIJING, CHINA**
*Guoyin Cai, Mingyi Du, Yong Xue, Shan Li*

**WEP.AA.7** **STUDY ON URBAN HEAT ISLAND OF BEIJING USING ASTER DATA ---- A QUANTITATIVE REMOTE SENSING PERSPECTIVE**
*Binyan Yan, Wenjie Fan, Xin Tao, Xiru Xu*

**WEP.AA.8** **STUDY ON URBAN HEAT ISLAND PHENOMENON IN A LOCAL SMALL CITY OF JAPAN USING AIRBORNE THEMAL IMAGE**
*Akinobu Murakami, Akira Hoyano*

## WEP.BB: Wednesday, July 9, 17:00 - 18:30

**WEP.BB** **Soil & Air Pollution Monitoring**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area BB
Co-Chairs: Ferdinando Nunziata and John Bolten

**WEP.BB.1** **ASSESSMENT OF ENVI FOREST HEALTH TOOL IN DETECTION DUST AND SEEPAGE CONTAMINATED FOREST AREAS**
*Jyrki Tuominen*

**WEP.BB.2** **AN INVESTIGATION OF AIR POLLUTION IN HONG KONG WITH ASTER DATA**
*Jie Guang, Yong Xue, Linyan Bai, Wei Wan, Jianping Guo, Xiaowen Li*

**WEP.BB.3** **A PRELIMINARY STUDY OF URBAN AIRBORNE INHALABLE PARTICLE SPATIAL DISTRIBUTION AND THEIR MECHANISM IN BEIJING USING RS AND GIS**
*Wenhui Zhao, Huili Gong, Zhaoning Gong*

**WEP.BB.4** **ESTIMATION OF ATMOSPHERIC HORIZONTAL VISIBILITY FROM SATELLITE REMOTE SENSING DATA**
*Xiaofeng Yang, Xingfa Gu, Liangfu Chen*

**WEP.BB.5** **AIR POLLUTION MONITORING SYSTEM BASED ON GEOSENSOR NETWORK**
*Young Jin Jung, Yang Koo Lee, Dong Gyu Lee, Keun Ho Ryu, Nittel Silvia*

**WEP.BB.6** **ESTIMATION OF THE LOAD OF TOTAL NITROGEN AND TOTAL PHOSPHORUS IN THE ENCLOSED BAY WATERSHED USING GIS**
*Mikihiro Ioka, Masaaki Takahashi, Satoshi Chiba*

## WEP.CC: Wednesday, July 9, 17:00 - 18:30



**WEP.CC** **Water Pollution Monitoring**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area CC
Co-Chairs: A. Ballard Andrews and Tobias Landmann

**WEP.CC.1** **OIL SPILL MONITORING USING MULTI-TEMPORAL SAR AND MICROWAVE SCATTEROMETER DATA**
*Yun Shao, Wei Tian, Shiang Wang, Fengli Zhang*

**WEP.CC.2** **ON THE MATHEMATICAL FORMULATION OF THE SAR OIL-SPILL OBSERVATION PROBLEM**
*Attilio Gambardella, Giorgio Giacinto, Maurizio Migliaccio*

**WEP.CC.3** **MULTISENSOR APPROACH TO OPERATIONAL OIL POLLUTION MONITORING IN COASTAL ZONES**
*Olga Lavrova, Marina Mityagina, Tatiana Bocharova, Andrey Kostianoy, Vladimir Krovotyntsev*

**WEP.CC.4** **DETECTION OF OIL SLICKS IN SAR IMAGES USING HIERARCHICAL MRF**
*David Morales, Miguel Moctezuma, Flavio Parmiggiani*

**WEP.CC.5** **DYNAMIC MONITORING THE ALGAE BLOOM IN THE TAIHU LAKE USING MODIS IMAGES**
*Di Wu, Bing Zhang, Junsheng Li, Qian Shen, Hao Zhang, Yuanfeng Wu*

**WEP.CC.6** **MONITORING ALGAE BLOOMS BY REMOTE SENSING IN LAKE TAIHU, CHINA**
*Qian Shen, Bing Zhang, Junsheng Li, Hao Zhang, Yuanfeng Wu, Di Wu*

**WEP.CC.7** **A SYSTEM FOR AUTOMATIC IDENTIFICATION OF OIL SPILL IN ENVISAT ASAR IMAGES**
*Wei Tian, Yun Shao, Shiang Wang*

**WEP.CC.8** **OBSERVATION OF CRUDE OIL SPILL OFF THE WEST COAST OF KOREA USING TERRASAR-X, ENVISAT ASAR AND ALOS PALSAR**
*Duk-Jin Kim, Boyeol Yoon, Younsoo Kim, Yongseung Kim*

## WEP.DD: Wednesday, July 9, 17:00 - 18:30

**WEP.DD** **Data Management and Systems I**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area DD
Co-Chairs: Roger King and Gregory Leptoukh

**WEP.DD.1** **APPLICATION OF REAL TIME GIS, REMOTE SENSING AND IC TAG FOR REALIZATION OF GEOSPATIAL INFORMATION SOCIETY**
*Sota Shimano, Mitoshi Moriya, Sayaka Takeuchi, Masaaki Shikada*

**WEP.DD.2** **ENERGY CONSUMPTION ESTIMATION IN HYBRID SENSOR NETWORKS RUNNING ASSISTED NAVIGATION ALGORITHMS**
*Franco Frattolillo, Federica Landolfi, Silvia Liberata Ullo*

**WEP.DD.3** **A TOOL TO QUERY AND VISUALIZE THE COMPLETE SRTM DATA SET INDEXED BY THE Q-TREE IN AN OPEN GIS**
*Félix Rodríguez Rodríguez, José Julián Hernández Piñero, Manuel Barrena García*

**WEP.DD.4** **DISTRIBUTING GLOBAL WILDFIRE INFORMATION THROUGH THE FIRE INFORMATION FOR RESOURCE MANAGEMENT SYSTEM (FIRMS)**
*Min Minnie Wong, Diane Davies, Shriram Ilavajhala*

**WEP.DD.5** **REUSE READINESS LEVELS AS A MEASURE OF SOFTWARE REUSABILITY**
*James Marshall, Robert Downs*

**WEP.DD.6** **THE AIRBORNE ATMOSPHERIC MEASUREMENT AND PROFILING SYSTEM - A REVOLUTIONARY DATA AND VISUALIZATION SYSTEM**
*James Carswell, James Canniff, Daniel Robinson, John Hill, Paul Chang*

**WEP.DD.7** **DATABASE SYSTEM FOR ARCHIVING AND MANAGING REMOTE SENSING IMAGES**
*Jianting Shi, Fujun Zhao*

**WEP.DD.8** **DATA ANALYIS SYSTEM DESIGN FOR LIDAR EXPERIMENTATION**
*Nimmi Sharma, Jo Ann Parikh*

## WEP.EE: Wednesday, July 9, 17:00 - 18:30

**WEP.EE** **Education, Outreach and Policy**
Session Type: Poster
Time: Wednesday, July 9, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area EE
Co-Chairs: Annette Schloss and Granville Paules

**WEP.EE.1** **GILMANTON SCHOOL AND UNH FOREST WATCH - COMPARING CLASSROOM COLLECTED DATA TO SPECTRAL INDICES: BENEFITS FOR MIDDLE SCHOOL STUDENTS**
*Mary Fougere*

**WEP.EE.2** **INTRODUCING STUDENTS TO THE GLOBAL ANALYSIS OF ENVIRONMENTAL PROCESSES, USING SEA SURFACE TEMPERATURE DATA FROM SPACE**
*David Llewellyn-Jones, Gary Corlett*

**WEP.EE.3** **BENEFITS TO STUDENTS AND TEACHERS OF PARTICIPATION IN THE FOREST WATCH PROGRAM**
*Robert Schongalla*

**WEP.EE.4** **PROMOTING SCIENCE THROUGH GIS AND REMOTE SENSING**
*Valentina David*

**WEP.EE.5** **CALIBRATING THE DMSP-OLS STABLE NIGHT LIGHTS DATA TO MAP URBAN AREA IN CHINA FROM 1992 TO 1993 BY USING GIS ANCILLARY DATA**
*Yang Yang, Chunyang He, Qingxu Huang, Yuanyuan Zhao*

**WEP.EE.6** **YOU BE THE POLAR SCIENTIST: DESIGN AND IMPLEMENTATION OF UNDERREPRESENTED K-12 STUDENT INVOLVEMENT IN KNOWLEDGE TRANSFER ACTIVITIES RELATED TO REMOTE SENSING OF ICE SHEETS**
*Linda Hayden, Darnell Johnson*

**WEP.EE.7** **TRAINING MINORITY UNDERGRADUATES IN NATURAL RESOURCE MANAGEMENT AND ENVIRONMENTAL ANALYSES BY USING GEOGRAPHIC INFORMATION SYSTEM AND REMOTE SENSING TECHNIQUES**
*Shobha Sriharan, James Everitt, Reginald Fltecher*

## TH1.210: Thursday, July 10, 08:20 - 10:00

### Panel Session

**TH1.210** **Human and Environmental Health**
Session Type: Panel
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 210
Chair: Melba Crawford
About: Landscape epidemiology is an emerging application area for the use of remote sensing data. This panel session will explore the ways in which measurements of specific environmental variables, which are important for the growth and dispersal of health risks, are used to predict and mitigate disease propagation and pandemics.

8:20
**TH1.210.1** **REMOTE SENSING TO MEET THE CHALLENGES OF ENVIRONMENTAL HEALTH**
*Gregory Glass*

8:53
**TH1.210.2** **OCEANS, CLIMATE, INFECTIOUS DISEASE, AND HUMAN HEALTH: FROM GENE PROBES TO REMOTE SENSING**
*Rita Colwell*

9:26
**TH1.210.3** **FROM STEMS TO CONTINENTS, GENES TO ECOSYSTEMS: REMOTE SENSING TO PREDICT HUMAN DISEASE**
*Maria A. Diuk-Wasser*

## TH1.101: Thursday, July 10, 08:20 - 10:00

**TH1.101** **Crustal Deformation and Subsurface Sensing**
Session Type: Oral-Contributed
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 101
Co-Chairs: Richard Gloaguen and Xun Luo

8:20
**TH1.101.1** **REMOTE SENSING ANALYSIS OF CRUSTAL DEFORMATION USING RIVER NETWORKS**
*Richard Gloaguen*

8:40
**TH1.101.2** **DEFORMATION MONITORING BY LONG TERM D-INSAR ANALYSIS IN THREE GORGES AREA, CHINA**
*Teng Wang, Daniele Perissin, Mingsheng Liao, Fabio Rocca*

9:00
**TH1.101.3** **MONITORING CRUSTAL DEFORMATION ALONG THE XIANSHUIHE FAULT IN THE EASTERN TIBETAN MARGIN AREA WITH ENVISAT SCANSAR INTERFEROMETRY**
*Liming Jiang, Hui Lin, Fang Liu*

9:20
**TH1.101.4** **EXTRACTION OF FLUID MOVEMENT RELATED SPECTRAL FEATURES FROM SEISMIC TRACES**
*Georgiy Bordakov, Sreechakra Goparaju, Jaideva Goswami*

9:40
**TH1.101.5** **SENSING ROOF CONDITIONS AHEAD OF A LONGWALL MINING USING THE SHEARER AS A SEISMIC SOURCE**
*Xun Luo, Andrew King, Matt Van de Werken*

## TH1.102: Thursday, July 10, 08:20 - 10:00

**TH1.102** **Advanced Methods for Polarimetric Information Extraction I**
Session Type: Oral-Invited
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 102
Co-Chairs: Ridha Touzi and Jean-Claude Souyris

8:20
**TH1.102.1** **SPECKLE FILTERING OF DUAL-POLARIZATION AND POLARIMETRIC SAR DATA BASED ON IMPROVED SIGMA FILTER**
*Jong-Sen Lee, Thomas Ainsworth, Kun-Shan Chen*

8:40
**TH1.102.2** **TURBO SPECKLE FILTERING APPLIED TO POLSAR DATA**
*Gregory Farage, Samuel Foucher, Carlos Lopez-Martinez, Goze B. Bénié*

9:00
**TH1.102.3** **POLARIMETRIC DATA DISTRIBUTION CHARACTERIZATION BY USING MUTIDIMENSIONNAL COPULAS**
*Lynda Bouchemakh, Gregoire Mercier, Youcef Smara*

9:20
**TH1.102.4** **CLASSIFICATION OF POLARIMETRIC SAR IMAGES USING RADIOMETRIC AND TEXTURE INFORMATION**
*Jean-Marie Beaulieu, Ridha Touzi*

9:40
**TH1.102.5** **ANALYSIS OF NATURAL SCENES USING POLARIMETRIC AND INTERFEROMETRIC SAR DATA STATISTICS IN PARTICULAR CONFIGURATIONS**
*Laurent Ferro-Famil, Maxim Neumann*

## TH1.103: Thursday, July 10, 08:20 - 10:00

**TH1.103** **Remote Sensing of the Cryosphere I**
Session Type: Oral-Invited
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 103
Co-Chairs: Marco Tedesco and Dorothy K. Hall

8:20
**TH1.103.1** **CHARACTERISTICS OF RECENT TRENDS IN NORTHERN HEMISPHERE SNOW COVER EXTENT**
*Ross Brown, Stephen Déry*

8:40
**TH1.103.2** **RECENT ICE SHEET AND GLACIER ELEVATION CHANGES IN GREENLAND FROM AIRCRAFT LASER ALTIMETRY.**
*William Krabill, Robert Thomas, John Sonntag, Serdar Manizade*

9:00
**TH1.103.3** **ALASKAN GLACIOLOGY FROM SPACE**
*Richard Forster, Jeff Van Looy, Dorothy K. Hall, Ryo Michishita*

9:20
**TH1.103.4** **MULTITEMPORAL, MULTISENSOR FUSION FOR MONITORING CRYOSPHERIC CHANGES IN ANTARCTICA FROM ICESAT ALTIMETRY AND IMAGERY**
*Beata Csatho, Toni Schenk, Taehun Yoon, Sudhagar Nagarajan*

9:40
**TH1.103.5** **MODELING TIMESERIES OF MICROWAVE BRIGHTNESS TEMPERATURE AT DOME-C, ANTARCTICA, USING NEW SNOW STRUCTURE MEASUREMENTS.**
*Ludovic Brucker, Hélène Brunjail, Ghislain Picard, Laurent Arnaud, Jean-Marc Barnola, Paul Duval, Michel Fily*

## TH1.104: Thursday, July 10, 08:20 - 10:00

**TH1.104** **Change Detection in Forested Landscapes I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 104
Co-Chairs: Curtis Woodcock and Bruce Chapman

8:20
**TH1.104.1** **CHANGE DETECTION IN IMAGE TIME-SERIES AFFECTED BY DIRECTIONAL REFLECTANCE AND PHENOLOGICAL VARIABILITY: APPLICATION TO FOREST DISTURBANCE MONITORING**
*Eric Nielsen, Mark Finco, Everett Hinkley*

8:40
**TH1.104.2** **EVALUATING THE POTENTIAL OF L BAND POLSAR DATA TO DISCRIMINATE DEFORESTATION INCREMENT AREAS IN AMAZON RAIN FOREST**
*Júlio Bandeira Guerra, Corina da Costa Freitas, José Claudio Mura*

9:00
**TH1.104.3** **NON-LINEAR REGRESSION MODELS TO IDENTIFY FUNCTIONAL FORMS OF DEFORESTATION**
*Shojiro Tanaka, Ryuei Nishii*

9:20
**TH1.104.4** **MAPPING FOREST CHANGE WITH LANDSAT 7 SLC-OFF DATA**
*Mutlu Ozdogan, Curtis E. Woodcock*

9:40
**TH1.104.5** **USE OF OPTICAL SATELLITE IMAGERY FOR ASSESSING LAND USE AND ECOSYSTEM CARBON STOCK IN SLASH-AND-BURN ECOSYSTEMS IN THE MOUNTAINOUS MAINLAND OF LAOS**
*Yoshio Inoue, Jiaguo Qi, Albert Olioso*

## TH1.105: Thursday, July 10, 08:20 - 10:00

**TH1.105** **Sensing and Modeling Ocean Physics**
Session Type: Oral-Contributed
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 105
Co-Chairs: Naoto Ebuchi and Roland Romeiser



8:20
**TH1.105.1** **SUBINERTIAL VARIATIONS IN THE SOYA WARM CURRENT REVEALED BY HF OCEAN RADARS, COASTAL TIDE GAUGES, AND BOTTOM-MOUNTED ADCP**
*Naoto Ebuchi, Yasushi Fukamachi, Kay Ohshima, Masaaki Wakatsuchi*

8:40
**TH1.105.2** **INVESTIGATION OF ATMOSPHERIC GRAVITY WAVES AND ROTORS IN THE MARINE BOUNDARY LAYER USING SPACEBORNE SYNTHETIC APERTURE RADAR IMAGES**
*Werner Alpers*

9:00
**TH1.105.3** **THE IMPACT OF SURFACE SCATTERING ON OCEAN ATMOSPHERIC BOUNDARY LAYER (ABL) WIND PROFILE ESTIMATES FROM AN AIRBORNE DOPPLER RADAR**
*Tao Chu, Stephen Frasier, Daniel Esteban-Fernandez, Paul Chang, James Carswell*

9:20
**TH1.105.4** **MEASURING AND MODELING THE NORMALIZED RADAR CROSS SECTION OF THE SEA FOR BACKSCATTER**
*Plant William, William Keller, Kenneth Hayes, Gene Chatham*

9:40
**TH1.105.5** **SEDIMENT MODELING BASED ON RADAR OBSERVED SURFACE HYDRODYNAMICS**
*Stephan Sedlacek, Friedwart Ziemer, Marius Cysewski*

## TH1.107: Thursday, July 10, 08:20 - 10:00

**TH1.107** **Image Analysis for Classification and Detection**
Session Type: Oral-Contributed
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 107
Co-Chairs: William Emery and Sebastiano Serpico

8:20
**TH1.107.1** **ACTIVE LEARNING OF VERY-HIGH RESOLUTION OPTICAL IMAGERY WITH SVM: ENTROPY VS MARGIN SAMPLING**
*Devis Tuia, Frédéric Ratle, Fabio Pacifici, Alexei Pozdnoukhov, Mikhail Kanevski, Fabio Del Frate, Domenico Solimini, William J. Emery*

8:40
**TH1.107.2** **CONTEXTUAL UNMIXING OF GEOSPATIAL DATA BASED ON GAUSSIAN MIXTURE MODELS AND MARKOV RANDOM FIELDS**
*Ryuei Nishii, Shuji Kawaguchi, Akiko Nakamoto, Yoko Sawamura*

9:00
**TH1.107.3** **REGION-BASED CLASSIFICATION OF MULTISENSOR OPTICAL-SAR IMAGES**
*Raffaele Gaetano, Gabriele Moser, Giovanni Poggi, Giuseppe Scarpa, Sebastiano Serpico*

9:20
**TH1.107.4** **ASSESSMENT OF FEATURE SELECTION TECHNIQUES FOR SUPPORT VECTOR MACHINE CLASSIFICATION OF SATELLITE IMAGERY**
*Tarek Habib, Jordi Inglada, Gregoire Mercier, Jocelyn Chanussot*

9:40
**TH1.107.5** **MODELING AND CLUSTERING TECHNIQUES FOR MULTI-BAND CHANGE DETECTION**
*Karin Griffis, Maja Bystrom*

## TH1.108: Thursday, July 10, 08:20 - 10:00

**TH1.108** **Interferometry I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 108
Co-Chairs: Howard Zebker and Othmar Frey

8:20
**TH1.108.1** **PALSAR SCANSAR-SCANSAR INTERFEROMETRY**
*Masanobu Shimada*

8:40
**TH1.108.2** **ADVANCES IN TIME SERIES PERSISTENT SCATTERER INSAR**
*Howard Zebker, Piyush Agram*

9:00
**TH1.108.3** **TECTONIC PARAMETERS DERIVED FROM WRAPPED SAR INTERFEROGRAMS**
*Béatrice Pinel-Puysségur, Rémi Michel, Jean-Philippe Avouac*

9:20
**TH1.108.4** **BISTATIC POLINSAR SCENARIO AND EVALUATION BY FOREST SCATTERING SIMULATIONS**
*Ludovic Villard, Irena Hajnsek, Pierre Borderies, Konstantinos Papathanassiou*

9:40
**TH1.108.5** **POTENTIAL OF ERS-2/ENVISAT TANDEM EXPERIMENT FOR GENERATING LOW-TOPOGRAPHY DEMS**
*Franz Meyer, Zhong Lu, Richard Guritz, Don Atwood*

## TH1.109: Thursday, July 10, 08:20 - 10:00

**TH1.109** **Space Hyperspectral Sensors and Programs I**
Session Type: Oral-Invited
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 109
Co-Chairs: Thomas Cooley and David Goodenough

8:20
**TH1.109.1** **THE HYPERSPECTRAL IMAGER FOR THE COASTAL OCEAN (HICO) ON THE INTERNATIONAL SPACE STATION**
*Michael Corson, Daniel Korwan, Robert Lucke, William Snyder, Curtiss Davis*

8:40
**TH1.109.2** **THE PRISMA PROGRAM**
*Claudio Galeazzi, Andrea Sacchetti, Andrea Cisbani, Gianni Babini*

9:00
**TH1.109.3** **RESULTS OF THE DECADAL SURVEY HYSPIRI IMAGING SPECTROMETER CONCEPT STUDY: A HIGH SIGNAL-TO-NOISE RATIO AND HIGH UNIFORMITY GLOBAL MISSION TO MEASURE PLANT PHYSIOLOGY AND FUNCTIONAL TYPE**
*Robert Green, Greg P. Asner, Stephen Ungar, Robert Knox*

9:20
**TH1.109.4** **ENVIRONMENTAL MAPPING AND ANALYSIS PROGRAM (ENMAP) – RECENT ADVANCES AND STATUS**
*Hermann Kaufmann, Luis Guanter, Karl Segl, Stefan Hofer, Klaus-Peter Förster, Timo Stuffler, Andreas Mueller, Rudolf Richter, Heike Bach, Patrick Hostert, Christian Chlebek*

9:40
**TH1.109.5** **EARTH OBSERVING ONE (EO-1): LESSONS NOT LEARNED!**
*Stephen Ungar*

## TH1.110: Thursday, July 10, 08:20 - 10:00

**TH1.110** **Remote Sensing of Agricultural Production and Sustainability I**
Session Type: Oral-Invited
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 110
Co-Chairs: Paul Doraiswamy and Charles Walthall



8:20
**TH1.110.1** **SOME INFORMATION NEEDS FOR AGRICULTURE**
*Dorsey Plunk, Sheryl Kunickis, Leonard Jolley*

8:40
**TH1.110.2** **LOW-ALTITUDE DIGITAL PHOTOGRAMMETRY TECHNIQUE TO ASSESS EPHEMERAL GULLY EROSION**
*James Frankenberger, Chi-Hua Huang, Kossi Nouwakpo*

9:00
**TH1.110.3** **THE USE OF REMOTE SENSING AND COMPUTER MODELING AS AIDS IN THE MANAGEMENT OF INVASIVE PLANT SPECIES IN THE WESTERN UNITED STATES.**
*Raymond Carruthers, Sarah Swope, David Bubenheim, Christopher Potter, Marc Kramer, Lee Johnson*

9:20
**TH1.110.4** **REMOTE SENSING AND MODELING METHODS FOR CROP GRAIN YIELD ASSESSMENT**
*Paul C. Doraiswamy, Bakhyt Akhmedov, Sushil Milak, Alan Stern*

9:40
**TH1.110.5** **MAPPING EVAPOTRANSPIRATION AND DROUGHT AT LOCAL TO CONTINENTAL SCALES USING THERMAL REMOTE SENSING**
*Martha C. Anderson, William P. Kustas*

## TH1.111: Thursday, July 10, 08:20 - 10:00

**TH1.111** **Improving Access to Earth Science Data: New Tools and Services I**
Session Type: Oral-Invited
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 111
Co-Chairs: Hampapuram Ramapriyan and Francis Lindsay

8:20
**TH1.111.1** **MODELING AND ON-THE-FLY SOLUTIONS FOR SOLID EARTH SCIENCES: WEB SERVICES AND DATA PORTAL FOR EARTHQUAKE EARLY WARNING SYSTEM**
*Yehuda Bock, Brendan Crowell, Linette Prawirodirdjo, Paul Jamason, Ruey-Juin Chang, Peng Fang, Melinda Squibb, Marlon Pierce, Xiaoming Gao, Frank Webb, Sharon Kedar, Robert Granat, Jay Parker, Danan Dong*

8:40
**TH1.111.2** **USING THE NASA NEESPI PORTAL DATA TO STUDY LAND, CLIMATE, AND SOCIO-ECONOMIC CHANGES IN NORTHERN EURASIA**
*Gregory Leptoukh, Suhung Shen, Ivan Csiszar, Peter Romanov, Tatiana Loboda, Irina Gerasimov*

9:00
**TH1.111.3** **PROVIDING GRIDDED ATMOSPHERIC RADIANCE PRODUCTS AND SERVICES FROM MODIS AND AIRS INSTRUMENTS ON NASA'S AQUA SATELLITE**
*Milton Halem, Curt Tilmes, Yelena Yesha, David Chapman, Phuong Nguyen*

9:20
**TH1.111.4** **INTEGRATING AND MANAGING DATA FROM MULTIPLE A-TRAIN SENSORS**
*Andrey Savtchenko, Steven Kempler, Peter Smith, Gregory Leptoukh, Graeme Stephens, David Winker*

9:40
**TH1.111.5** **THE ATMOSPHERIC COMPOSITION PROCESSING SYSTEM (ACPS): EXTENDING OZONE PROCESSING TO THE COMMUNITY**
*Curt Tilmes*

## TH1.203: Thursday, July 10, 08:20 - 10:00

**TH1.203** **Tropical Rainfall Measurement Mission I**
Session Type: Oral-Invited
Time: Thursday, July 10, 08:20 - 10:00
Place: Room 203
Co-Chairs: Shuji Shimizu and Chandrasekar V. Chandra

8:20
**TH1.203.1** **EVALUATION OF THE EFFECT OF THE ORBIT BOOST OF THE TRMM SATELLITE ON THE PR RAIN ESTIMATES**
*Shuji Shimizu, Toshio Iguchi, Riko Oki, Masafumi Hirose, Tetsuya Tagawa*

8:40
**TH1.203.2** **EVALUATION AND IMPROVEMENT OF SURFACE REFERENCE TECHNIQUES FOR THE TRMM PR**
*Shinta Seto, Taikan Oki, Toshio Iguchi*

9:00
**TH1.203.3** **DERIVATION OF SUB-FOOTPRINT SCALE SIGMA^0 OBSERVED BY TRMM PRECIPITATION RADAR**
*Tetsuya Tagawa, Shuji Shimizu, Riko Oki*

9:20
**TH1.203.4** **BROADENING TRMM-PR REFLECTIVITY SPECTRUM BASED ON HIGHLY-SENSITIVE CLOUDSAT-CPR DATA FOR USE IN AUGMENTED DIURNAL PRECIPITATION STUDIES**
*Eric A. Smith, Kwo-Sen Kuo, Hezekiah M. Carty*

9:40
**TH1.203.5** **SOME APPROACHES TO VALIDATING TRMM AND GPM RADAR PRODUCTS AND ALGORITHMS**
*Robert Meneghini, Liang Liao, John Kwiatkowski, Toshio Iguchi*

## TH2.101: Thursday, July 10, 10:20 - 12:00

**TH2.101** **3D Urban Mapping I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 101
Co-Chairs: Zhiqiang Chen and Karin Hedman

10:20
**TH2.101.1** **EXTRACTION OF BUILDING HEIGHTS FROM VHR SAR IMAGERY USING AN ITERATIVE SIMULATION AND MATCH PROCEDURE**
*Dominik Brunner, Guido Lemoine, Lorenzo Bruzzone*

10:40
**TH2.101.2** **3D URBAN REMOTE SENSING USING DUAL-BASELINE POL-INSAR IMAGES AT L-BAND**
*Stefan Sauer, Laurent Ferro-Famil, Andreas Reigber, Eric Pottier*

11:00
**TH2.101.3** **CLASSIFICATION OF BASIC ROOF TYPES BASED ON VHR OPTICAL DATA AND DIGITAL ELEVATION MODEL**
*Silvia Valero, Jocelyn Chanussot, Philippe Gueguen*

11:20
**TH2.101.4** **BUILDING DETECTION FROM HIGH RESOLUTION POLSAR DATA BY COMBINING REGION AND EDGE INFORMATION**
*Yinghua Wang, Florence Tupin, Chongzhao Han, Jean-Marie Nicolas*

11:40
**TH2.101.5** **OPTIMAL PROCESSING FOR GEOMETRIC AND TOPOLOGICAL FEATURES EXTRACTION FROM TERRASAR-X DATA**
*Houda Chaabouni-Chouayakh, Mihai Datcu*

## TH2.102: Thursday, July 10, 10:20 - 12:00

**TH2.102** **Advanced Methods for Polarimetric Information Extraction II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 102
Co-Chairs: Ridha Touzi and Jean-Claude Souyris



10:20
**TH2.102.1** **URBAN FEATURE CHARACTERIZATION USING POLARIMETRIC AND POL-IN SAR DATA**
*Ridha Touzi, Karim Mattar, Laurence Gray*

10:40
**TH2.102.2** **COHERENT DECOMPOSITION OF FULLY POLARIMETRIC RADAR DATA**
*Yoshio Yamaguchi, Jun Nakamura, Kazuyasu Aoyama, Hiroyoshi Yamada*

11:00
**TH2.102.3** **SETHI, THE NEW ONERA MULTISPECTRAL AIRBORNE SAR SYSTEM**
*Philippe Dreuillet, Gregory Bonin, Olivier Ruault du Plessis, Sebastien Angelliaume, Hubert Cantalloube, Pascale Dubois-Fernandez, Xavier Dupuis*

11:20
**TH2.102.4** **ASSESSMENT OF TERRASAR-X DUAL-POL MODES FOR EPIDEMIOLOGY: A STUDY CASE IN FERLO REGION, SENEGAL**
*Jean-Claude Souyris, Nadine Pourthié, Céline Tison, Murielle Lafaye, Jean-Pierre Lacaux, Oscar Miranda, Alain Arnaud, Anne Urdiroz*

11:40
**TH2.102.5** **PERFORMANCE ANALYSIS OF MULTIVARIATE SUPER-RESOLUTION PROCESSING OF POLARIMETRIC SYNTHETIC APERTURE RADAR TOMOGRAPHY**
*Honglei Chen, Dayalan Kasilingam*

## TH2.103: Thursday, July 10, 10:20 - 12:00

**TH2.103** **Remote Sensing of the Cryosphere II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 103
Co-Chairs: Marco Tedesco and Dorothy K. Hall

10:20
**TH2.103.1** **A WIDEBAND RADAR FOR ICE SHEET SURFACE ELEVATION MEASUREMENTS AND NEAR-SURFACE INTERNAL LAYER MAPPING**
*Cameron Lewis, Fernando Rodriguez-Morales, Heather Owen, Aqsa Patel, Deebu Abi, Carl Leuschen, Sivaprasad Gogineni*

10:40
**TH2.103.2** **MAPPING SNOW GRAIN SIZE OVER GREENLAND FROM MODIS**
*Alexei Lyapustin, Yujie Wang, Marco Tedesco, Alexander Kokhanovsky*

11:00
**TH2.103.3** **BALTIC SEA ICE THICKNESS CHARTS BASED ON THERMODYNAMIC SNOW/ICE MODEL, C-BAND SAR CLASSIFICATION AND ICE MOTION DETECTION**
*Juha Karvonen, Bin Cheng, Markku Similä, Martti Hallikainen*

11:20
**TH2.103.4** **COMPARISON OF AIRBORNE RADAR ALTIMETER AND GROUND-BASED KU-BAND RADAR MEASUREMENTS ON THE ICE CAP AUSTFONNA, SVALBARD**
*Ola Brandt, Robert L. Hawley, Jack Kohler, Jon Ove Hagen, Elizabeth Morris, Julian B.T. Scott, Trond Eiken, Thorben Dunse, Geir Moholt*

11:40
**TH2.103.5** **ANALYSIS AND CLASSIFICATION OF HIGH ARCTIC GLACIERS WITH ASAR DATA**
*Anthony Doulgeris, Kirsty Langley, Torbjørn Eltoft*

## TH2.104: Thursday, July 10, 10:20 - 12:00

**TH2.104** **Recent Advances in Change Detection Techniques**
Session Type: Oral-Contributed
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 104
Co-Chairs: Francesca Bovolo and Andrew French

10:20
**TH2.104.1** **A MULTILEVEL CONTEXTUAL APPROACH TO CHANGE DETECTION FOR VERY HIGH RESOLUTION IMAGES**
*Chunlei Huo, Keming Chen, Zhixin Zhou, Hanqing Lu, Jian Cheng*

10:40
**TH2.104.2** **DETECTION OF LAND COVER CHANGE USING AN ARTIFICIAL NEURAL NETWORK WITHIN A TEMPORAL SLIDING WINDOW ON MODIS TIME SERIES DATA**
*Jan Olivier, Konrad Wessels, Seare Araya*

11:00
**TH2.104.3** **DEVELOPMENT OF A SCALE INDEPENDENT APPROACH FOR LANDSCAPE PATTERN METRICS USING FOURIER VECTOR ANALYSIS OF SATELLLITE IMAGES**
*Alvin Spivey, Anthony Vodacek*

11:20
**TH2.104.4** **OBJECT-LEVEL SEMANTIC CHANGE INTERPRETATION FOR MULTI-BAND REMOTELY SENSED IMAGERY**
*Karin Griffis, Maja Bystrom*

11:40
**TH2.104.5** **LANDSCAPE CHANGE AND ITS SIMULATION USING GIS, LANDSCAPE ECOLOGY AND THE MARKOV MODEL**
*Jiayu Wu, Hongguang Cheng, Ayan Zeng, Fanghua Hao, Dan Wang, Li Gong*

## TH2.105: Thursday, July 10, 10:20 - 12:00

**TH2.105** **High Resolution Microwave Sensing of Ocean Wind and Waves**
Session Type: Oral-Contributed
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 105
Co-Chairs: William Plant and Werner Alpers

10:20
**TH2.105.1** **AN L-BAND WIND RETRIEVAL MODEL FUNCTION DERIVED FROM PALSAR**
*Osamu Isoguchi, Masanobu Shimada*

10:40
**TH2.105.2** **OBSERVATION OF BORA EVENTS USING SYNTHETIC APERTURE RADAR**
*Jochen Horstmann, Werner Alpers, Richard P. Signell*

11:00
**TH2.105.3** **CROSS COMPARISON OF ALOS PALSAR L-BAND WIND RETRIEVAL MODEL FUNCTIONS**
*Frank M. Monaldo, Donald R. Thompson*

11:20
**TH2.105.4** **COINCIDENT ATMOSPHERIC GRAVITY WAVE SIGNATURES FROM ENVISAT ASAR AND MERIS**
*Jochen Horstmann, Todd Sikora, Iain Cameron, Nathaniel S. Winstead*

11:40
**TH2.105.5** **VALIDATION AND EVALUATION OF QUIKSCAT ULTRA-HIGH RESOLUTION WIND RETRIEVAL IN THE GULF OF MAINE**
*Amanda Plagge, Doug Vandemark, David G. Long*

## TH2.107: Thursday, July 10, 10:20 - 12:00

**TH2.107** **Kernel Methods for Image Analysis and Classification**
Session Type: Oral-Contributed
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 107
Co-Chairs: Gregoire Mercier and Gustavo Camps-Valls



10:20
**TH2.107.1** **MULTIVARIATE AR MODEL BASED SUPPORT VECTOR MACHINE FOR MULTISPECTRAL REMOTE SENSING IMAGE CLASSIFICATION**
*Pei-Gee Peter Ho, Chi-Hau Chen*

10:40
**TH2.107.2** **A FLEXIBLE METRIC NEAREST-NEIGHBOR CLASSIFICATION BASED ON THE DECISION BOUNDARIES OF SVMS FOR HYPERSPECTRAL IMAGE**
*Hsin-Hua Ho, Bor-Chen Kuo, Jin-Shiuh Taur, Cheng-Hsuan Li*

11:00
**TH2.107.3** **SEMI-SUPERVISED KERNEL ORTHOGONAL SUBSPACE PROJECTION**
*Luca Capobianco, Gustavo Camps-Valls, Andrea Garzelli*

11:20
**TH2.107.4** **VERY-HIGH RESOLUTION IMAGE CLASSIFICATION USING MORPHOLOGICAL OPERATORS AND SVM**
*Devis Tuia, Fabio Pacifici, Alexei Pozdnoukhov, Christian Kaiser, Domenico Solimini, William J. Emery*

11:40
**TH2.107.5** **GRADIENT OPTIMIZATION FOR MULTIPLE KERNEL'S PARAMETERS IN SUPPORT VECTOR MACHINES CLASSIFICATION**
*Alberto Villa, Mathieu Fauvel, Jocelyn Chanussot, Paolo Gamba, Jón Atli Benediktsson*

## TH2.108: Thursday, July 10, 10:20 - 12:00

**TH2.108** **Interferometry II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 108
Co-Chairs: Howard Zebker and Tom Lukowski

10:20
**TH2.108.1** **A COMPARATIVE ANALYSIS OF TROPOSPHERIC WATER VAPOR MEASUREMENTS FROM MERIS AND SAR**
*Franz Meyer, Richard Bamler, Ronny Leinweber, Juergen Fischer*

10:40
**TH2.108.2** **BAYESIAN DEM RECONSTRUCTION FROM SAR AND OPTICAL DATA**
*Giampaolo Ferraioli, Fabio Baselice, Vito Pascazio*

11:00
**TH2.108.3** **TIME SERIES ANALYSIS OF SCANSAR INTERFEROGRAMS USING THE SMALL BASELINE SUBSET (SBAS) TECHNIQUE**
*Krishnavikas Gudipati, Sean M. Buckley*

11:20
**TH2.108.4** **AN EXPERIMENT OF GB-SAR INTERFEROMETRIC MEASUREMENT OF TARGET DISPLACEMENT AND ATMOSPHERIC CORRECTION**
*Hoonyol Lee, Jae-Hee Lee, Seong-Jun Cho, Nak-Hoon Sung, Jung-Ho Kim*

11:40
**TH2.108.5** **SCANSAR DIFFERENTIAL INTERFEROMETRY AND WET DELAY CORRECTION: CASE STUDIES IN DANGXIONG, TIBET**
*Jianying Jia, Qiming Zeng, Jian Jiao, Ying Li, Xiai Cui*

## TH2.109: Thursday, July 10, 10:20 - 12:00

**TH2.109** **Space Hyperspectral Sensors and Programs II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 109
Co-Chairs: David Goodenough and Thomas Cooley

10:20
**TH2.109.1** **ESTABLISHMENT OF THE INTERNATIONAL SPACEBORNE IMAGING SPECTRSOCOPY (ISIS) WORKING GROUP**
*A. Alexander Held*

10:40
**TH2.109.2** **THE WORLD'S FIRST COMMERCIAL HYPERSPECTRAL DATA SERVICE FROM EARTH OBSERVATION SATELLITE**
*Duke Takahashi*

11:00
**TH2.109.3** **ADVANCED RESPONSIVE TACTICALLY-EFFECTIVE MILITARY IMAGING SPECTROMETER (ARTEMIS)**
*Thomas Cooley, Ronald Lockwood, Richard Nadile, James Gardner, Peter Armstrong, Abraham Payton, Thom Davis, Stan Straight*

11:20
**TH2.109.4** **METHODOLOGY FOR THE RETRIEVAL OF VEGETATION CHLOROPHYLL FLUORESCENCE FROM SPACE IN THE FRAME OF THE FLEX MISSION PREPARATORY ACTIVITIES**
*Luis Guanter, Karl Segl, Hermann Kaufmann, Wout Verhoef, Luis Alonso, Luis Gomez-Chova, Jose Moreno, Juergen Fischer, Rene Preusker, Ferran Gascon*

11:40
**TH2.109.5** **SPACEBORNE HYPERSPECTRAL IMAGE GENERATION BASED ON AIRBORNE HYPERSPECTRAL IMAGE**
*Junping Zhang, Wenjie Zhang, Haibin Jiao, Ye Zhang*

## TH2.110: Thursday, July 10, 10:20 - 12:00

**TH2.110** **Remote Sensing of Agricultural Production and Sustainability II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 110
Co-Chairs: Charles Walthall and Ana Barros

10:20
**TH2.110.1** **LIDAR BASED PARTICULATE FLUX MEASUREMENTS OF AGRICULTURAL FIELD OPERATIONS**
*Gail E. Bingham, Christian Marchant, Vladimir V. Zavyalov, Douglas J. Ahlstrom, Kori Moore, Thomas D. Wilkerson, Larry E. Hipps, Randal S. Martin, Jerry L. Hatfield, John Prueger*

10:40
**TH2.110.2** **IMPROVED REMOTELY-SENSED ESTIMATES OF CROP RESIDUE COVER BY INCORPORATING SOILS INFORMATION**
*Guy Serbin, C. S. T. Daughtry, E. Raymond Hunt Jr., Gregory W. McCarty, Paul C. Doraiswamy, David J. Brown*

11:00
**TH2.110.3** **COMBINING HYPERSPECTRAL INDICES FOR NITROGEN PREDICTIONS IN CORN CANOPIES**
*Pengfei Chen, Driss Haboudane, Nicolas Tremblay, Jihua Wang, Philippe Vigneault*

11:20
**TH2.110.4** **WATER FOR FOOD PRODUCTION - OPPORTUNITIES FOR SUSTAINABLE LAND-WATER MANAGEMENT USING REMOTE SENSING**
*Ana P. Barros*

11:40
**TH2.110.5** **PHYSICALLY-BASED METHODS FOR THE ESTIMATION OF CROP WATER REQUIREMENTS FROM E.O. OPTICAL DATA**
*Francesco Vuolo, Guido D'Urso, Katja Richter, John Prueger, William P. Kustas*

## TH2.111: Thursday, July 10, 10:20 - 12:00

**TH2.111** **Improving Access to Earth Science Data: New Tools and Services II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 111
Co-Chairs: Francis Lindsay and Hampapuram Ramapriyan

10:20
**TH2.111.1** **BUILDING NEW TOOLS OUTSIDE THE BROWSER: A NEW LOOK AT CUSTOM STAND-ALONE APPLICATIONS FOR EARTH DATA ACCESS AND VISUALIZATION**
*Bruce Caron*

10:40
**TH2.111.2** **MINING SCIENTIFIC DATA USING INTERNET AS THE COMPUTER**
*Sara Graves, Rahul Ramachandran, Manil Maskey, Ken Keiser, Christopher Lynnes, Long Pham*

11:00
**TH2.111.3** **RECENT EXPERIENCE IN ASSEMBLING DATA SETS FOR PRECIPITATION RESEARCH AND RECOMMENDATIONS FOR DATA SYSTEM IMPROVEMENTS**
*Kwo-Sen Kuo, Hezekiah M. Carty, Eric A. Smith, Steve Bilanow, Michael A. Hensley, Deborah Vane, Graeme Stephens*

11:20
**TH2.111.4** **DATA ACCESS TOOLS - FILLING THE USABILITY GAP IN CRYOSPHERE DATA**
*David Gallaher, Julienne Stroeve, Ross Swick, Ronald L. S. Weaver*

11:40
**TH2.111.5** **A WEB SERVICES APPROACH FOR IEOS**
*Francis Lindsay, Lyndon Oleson*

## TH2.203: Thursday, July 10, 10:20 - 12:00

**TH2.203** **Tropical Rainfall Measurement Mission II**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 203
Co-Chairs: Chandrasekar V. Chandra and Shuji Shimizu

10:20
**TH2.203.1** **HYBRID NEURAL NETWORK TECHNIQUE TO ESTIMATE RAINFALL FROM TRMM MEASUREMENTS**
*V. Chandrasekar, Amin Alqudah, Yanting Wang*

10:40
**TH2.203.2** **PRECIPITATION FEATURE CHARACTERISTICS DURING AN AFRICAN EASTERLY WAVE PASSAGE**
*Robert Cifelli, Timothy Lang, Steven Rutledge*

11:00
**TH2.203.3** **AN IMPROVED OCEANIC RAINFALL RETRIEVAL ALGORITHM FOR THE SEAWINDS SCATTEROMETER**
*Khalil Ahmad, W. Linwood Jones, Takis Kasparis*

11:20
**TH2.203.4** **PROGRESS TOWARD VALIDATION OF QUIKSCAT ULTRA-HIGH-RESOLUTION RAIN RATES USING TRMM PR**
*Michael P. Owen, David G. Long*

11:40
**TH2.203.5** **A KALMAN FILTER APPROACH TO CMORPH PASSIVE MICROWAVE RAINFALL ESTIMATION**
*Robert Joyce, Pingping Xie*

## TH2.210: Thursday, July 10, 10:20 - 12:00

**TH2.210** **Atmospheric Remote Sensing for Air Pollution and Human Health**
Session Type: Oral-Invited
Time: Thursday, July 10, 10:20 - 12:00
Place: Room 210
Co-Chairs: Juliet Wallace and Verne Kaupp

10:20
**TH2.210.1** **DEVELOPING AEROSOL HEIGHT FROM MODIS FOR AIR QUALITY APPLICATION AND SYNERGY WITH CALIPSO MEASUREMENTS IN EVALUATING RETRIEVAL UNCERTAINTIES**
*D. Allen Chu, James Szykman, Chieko Kittaka, Mian Chin, H.-C. Liu, Lorraine Remer, David Winker*

10:40
**TH2.210.2** **APPLICATION OF SATELLITE AEROSOL OPTICAL DEPTH AND AIRBORNE LIDAR DATA FOR MONITORING AND EVALUATING SPATIAL GRADIENT OF FINE PARTICULATE MATTER IN THE SAN JOAQUIN VALLEY, CALIFORNIA**
*James Szykman, Jassim Al-Saadi, Rebecca Rosen, Carol Bohnenkamp, D. Allen Chu, John Hair, Richard Ferrare, Chris Hostetler, Ajith Kaduwela, Gary Arcemont, Shobha Kondragunta, Chieko Kittaka, Jasper Lewis*

11:00
**TH2.210.3** **STUDY OF GLOBAL AIR QUALITY AND BIOLOGICALLY ACTIVE UV RADIATION FROM SATELLITES**
*Pawan Bhartia, Nickolai Krotkov, Xiong Liu, Omar Torres, James Gleason*

11:20
**TH2.210.4** **ANALYSIS OF THE INTERACTION OF AEROSOL TRANSPORT LAYERS ON LOCAL AIR QUALITY**
*Chuen Gan, Leona Charles, Barry Gross, Fred Moshary, Samir Ahmed*

11:40
**TH2.210.5** **THE THREE DIMENSIONAL AIR QUALITY SYSTEM (3D-AQS)**
*Raymond Hoff, Jill Engel-Cox*

## TH3.101: Thursday, July 10, 13:20 - 15:00

**TH3.101** **3D Urban Mapping II**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 101
Co-Chairs: Dominik Brunner and Jocelyn Chanussot

13:20
**TH3.101.1** **LAND SUBSIDENCE MONITORING AND ANALYSIS USING MULTI-SOURCE MULTI-TEMPORAL DIGITAL ELEVATION MODELS**
*Pai-Hui Hsu*

13:40
**TH3.101.2** **3D MEASUREMENT THROUGH PANORAMIC PHOTOGRAPHY**
*Qiaozhen Huang, Shaoxing Hu*

14:00
**TH3.101.3** **3D URBAN GEOLOGICAL MODELING AND ITS APPLICATION IN CHINA: TECHNOLOGIES AND DEVELOPMENTS**
*De-Fu Che, Li-Xin Wu, Zuo-Ru Yin*

14:20
**TH3.101.4** **EXTRACTING HEIGHT DISTRIBUTION INFORMATION ABOUT HIGH-RISE BUILDINGS OF BEIJING USING SHADOW IN SPOT-5 DATA**
*Zhiwei Ye, Lin Zhu, Huili Gong*

14:40
**TH3.101.5** **PROBABILISTIC REPRESENTATION OF STRUCTURAL INTEGRITY OF URBAN BUILDINGS IN REMOTELY SENSED IMAGES**
*Zhiqiang Chen, Tara Hutchinson*

## TH3.102: Thursday, July 10, 13:20 - 15:00

**TH3.102** **SAR Polarimetry: Theory and Applications I**
Session Type: Oral-Invited
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 102
Co-Chairs: Carlos Lopez-Martinez and Eric Pottier



13:20
**TH3.102.1** **POLARIMETRIC ANALYSIS OF DUAL-POL SAR IMAGERY**
*John Kelly, Thomas Ainsworth, Jong-Sen Lee*

13:40
**TH3.102.2** **REVIEW OF POLARIMETRIC INDICATORS FOR FOREST CHARACTERISATION OVER SEVERAL SITES**
*Pascale Dubois-Fernandez, Sebastien Angelliaume, Isabelle Champion, Lars M. H. Ulander*

14:00
**TH3.102.3** **AGRICUTLURAL VEGETATION PARAMETER ESTIMATION USING POL-INSAR**
*Irena Hajnsek, Helmut Schön, Thomas Jagdhuber, Konstantinos Papathanassiou*

14:20
**TH3.102.4** **DEFORMATION MAPS RETRIEVAL OF URBAN AREAS USING GROUND-BASED POLSAR ACQUISITIONS**
*Luca Pipia, Xavier Fabregas, Albert Aguasca, Sergi Duque, Jordi J. Mallorqui, Carlos Lopez-Martinez*

14:40
**TH3.102.5** **POLARIMETRIC SCATTERING MODEL DECOMPOSITION FOR POL-INSAR DATA**
*Hiroyoshi Yamada, Yoshio Yamaguchi, Ryoichi Sato*

## TH3.103: Thursday, July 10, 13:20 - 15:00

**TH3.103** **Active Remote Sensing of the Cryosphere I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 103
Co-Chairs: Simon Yueh and Helmut Rott

13:20
**TH3.103.1** **MONITORING CHANGES IN THE ANTARCTIC ICE SHEET FROM 1978 TO 2007**
*Benjamin Lambert, David G. Long*

13:40
**TH3.103.2** **DECADAL MASS BALANCE OF THE GREENLAND AND ANTARCTIC ICE SHEETS FROM HIGH RESOLUTION ELEVATION CHANGE ANALYSIS OF ERS-2 AND ENVISAT RADAR ALTIMETRY MEASUREMENTS**
*Yonghong Li, Curt H. Davis*

14:00
**TH3.103.3** **APPLICATION OF ALOS PALSAR AND LANDSAT ETM+ DATA FOR THE STUDY OF PERIGLACIAL FEATURES AND PERMAFROST WITHIN THE SOUTH SHETLAND ISLANDS, WESTERN ANTARCTICA**
*Magaly Koch, Jerónimo López-Martínez, Thomas Schmid, Enrique Serrano, José Gumuzzio*

14:20
**TH3.103.4** **VELOCITIES OF MAJOR OUTLET GLACIERS OF THE PATAGONIA ICEFIELD OBSERVED BY TERRASAR-X**
*Dana Floricioiu, Helmut Rott, Thomas Nagler, Michael Eineder*

14:40
**TH3.103.5** **ESTIMATION OF ACCUMULATION AREA RATIO OF A GLACIER FROM MULTI-TEMPORAL SATELLITE IMAGES USING SPECTRAL UNMIXING**
*Jonathan Cheung-Wai Chan, Jeremy Van Ophem, Philippe Huybrechts*

## TH3.104: Thursday, July 10, 13:20 - 15:00

**TH3.104** **Change Detection in Land Use / Land Cover I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 104
Co-Chairs: Ray Hunt and Marc Imhoff

13:20
**TH3.104.1** **ASSESSING THE IMPACTS OF MODIS COLLECTION 5 ON CHANGE DETECTION IN THE BRAZILIAN SAVANNA**
*Laerte Ferreira, Marlon Nemayer, Genival Fernandes, Manuel Ferreira, Nilson Ferreira*

13:40
**TH3.104.2** **USING REMOTE SENSING DATA TO QUANTIFY CHANGES IN VEGETATION OVER PEATLAND AREAS**
*Natasha MacBean, Mathias Disney, Philip Lewis, Phil Ineson*

14:00
**TH3.104.3** **MAPPING THE HISTORY OF ENVIRONMENTAL IMPACTS OF LAND-FALLING HURRICANES IN THE SOUTHEASTERN UNITED STATES – A DEMONSTRATION FOR ISABEL**
*Julien Brun, Ana P. Barros*

14:20
**TH3.104.4** **FINE-RESOLUTION EROSION ESTIMATION ON LARGE SCALE BASED ON REMOTE SENSING DATA - AN APPROACH FOR TIBET AND CONNECTED REGIONS**
*Mathias Leidig, Richard Gloaguen*

14:40
**TH3.104.5** **RADAR POLAR DECOMPOSITION FOR THE CARTOGRAPHY OF NATURAL SURFACES**
*Cedric Lardeux, Pierre-Louis Frison, Jean-Claude Souyris, Céline Tison, Benoît Stoll, Jean-Paul Rudant*

## TH3.105: Thursday, July 10, 13:20 - 15:00

**TH3.105** **Optical Sensing in the Coastal Ocean**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 105
Co-Chairs: Christoph Aubrecht and Giuliana Pennucci

13:20
**TH3.105.1** **EARTH OBSERVATION BASED ASSESSMENT OF ANTHROPOGENIC STRESS TO CORAL REEFS - A GLOBAL ANALYSIS**
*Christoph Aubrecht, Christopher D. Elvidge, Mark Eakin*

13:40
**TH3.105.2** **MULTI-ANGULAR MULTI-SPECTRAL POLARIZED REFLECTANCE FROM COASTAL WATERS FOR THE SEPARATION OF WATER ORGANIC AND INORGANIC PARTICULATE COMPONENTS**
*Alberto Tonizzo, Rushane Dyer, Jing Zhou, Alex Gilerson, Jacek Chowdhary, Barry Gross, Fred Moshary, Samir Ahmed*

14:00
**TH3.105.3** **APPLICATION OF UV AND NIR BANDS FOR THE ADVANCED IOP RETRIEVAL ALGORITHMS IN COASTAL WATERS**
*Ioannis Ioannou, Nicholas Steiner, Jing Zhou, Alexander Gilerson, Barry Gross, Fred Moshary, Samir Ahmed*

14:20
**TH3.105.4** **AN INCREASED POTENTIAL FOR THE LANDSAT DATA CONTINUITY MISSION (LDCM) TO CONTRIBUTE TO WATER QUALITY STUDIES FOR INLAND, CASE 2 WATERS**
*Aaron Gerace, John R. Schott*

14:40
**TH3.105.5** **AIRCRAFT AND IN SITU SALINITY AND OCEAN COLOR MEASUREMENTS AND COMPARISONS IN THE GULF OF MEXICO**
*Joel Wesson, Derek Burrage, Chris Osburn, Stephan Howden, Xiagong Chen*

## TH3.107: Thursday, July 10, 13:20 - 15:00

**TH3.107** **Image Classification - Techniques and Applications**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 107
Co-Chairs: Lorenzo Bruzzone and Selim Aksoy

13:20
**TH3.107.1** **MULTIDIMENSIONAL IMAGE CLASSIFICATION BASED ON INFLUENCE CONTROLLERS OF THE CLASSES IN THE IMAGES**
*Orlando Alves Maximo, David Fernandes*

13:40
**TH3.107.2** **SEMI-SUPERVISED REMOTE SENSING IMAGE CLASSIFICATION BASED ON CLUSTERING AND KERNEL MEANS**
*Luis Gomez-Chova, Lorenzo Bruzzone, Gustavo Camps-Valls, Javier Calpe-Maravilla*

14:00
**TH3.107.3** **ON COMBINING UNSUPERVISED CLASSIFICATION AND ONTOLOGY KNOWLEDGE**
*Germain Forestier, Cédric Wemmert, Pierre Gançarski*

14:20
**TH3.107.4** **HYPERSPECTRAL IMAGE CLASSIFICATION OF GRASS SPECIES IN NORTHEAST JAPAN**
*Sildomar Monteiro, Kuniaki Uto, Yukio Kosugi, Kunio Oda, Yoshiyuki Iino, Genya Saito*

14:40
**TH3.107.5** **AUTOMATIC MAPPING OF LINEAR WOODY VEGETATION FEATURES IN AGRICULTURAL LANDSCAPES**
*Selim Aksoy, Gokhan Akcay, Gokberk Cinbis, Tom Wassenaar*

## TH3.108: Thursday, July 10, 13:20 - 15:00

**TH3.108** **SAR Processing I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 108
Co-Chairs: Charles Werner and Franz Meyer

13:20
**TH3.108.1** **A NEW SUPERRESOLUTION SAR IMAGING ALGORITHM BASED ON EXTRAPOLATION**
*Ping Zhang, Ruliang Yang*

13:40
**TH3.108.2** **IDENTIFICATION OF COHERENT SCATTERERS: SPECTRAL CORRELATION VS. MULTI-CHROMATIC PHASE ANALYSIS**
*Vito Martino Giacovazzo, Alberto Refice, Fabio Bovenga, Nicola Veneziani*

14:00
**TH3.108.3** **IMPROVEMENT OF RANGE AMBIGUITIES BY UP/DOWN-CHIRP CODING**
*Josef Mittermayer, Steffen Wollstadt, Nuria Tous-Ramon, Adriano Meta*

14:20
**TH3.108.4** **FOCUSING SAR DATA ACQUIRED FROM NON-LINEAR SENSOR TRAJECTORIES**
*Othmar Frey, Christophe Magnard, Maurice Rueegg, Erich Meier*

14:40
**TH3.108.5** **IMAGE REGISTRATION OF TERRASAR-X DATA USING DIFFERENT INFORMATION MEASURES**
*Holger Nies, Otmar Loffeld, Baki Dönmez, Amina Ben Hammadi, Robert Wang*

## TH3.109: Thursday, July 10, 13:20 - 15:00

**TH3.109** **Future Space-based Optical Instruments**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 109
Co-Chairs: Steve Ungar and Ronald Lockwood

13:20
**TH3.109.1** **DEVELOPMENT OF A COMPACT, LIGHTWEIGHT, PASSIVE FABRY-PEROT RADIOMETER FOR MEASUREMENTS OF TRACE GASES IN THE MARTIAN ATMOSPHERE**
*Elena Georgieva, William Heaps, Emily Wison*

13:40
**TH3.109.2** **STATUS OF THE OPTICAL PAYLOAD AND PROCESSOR DEVELOPMENT OF ESA'S SENTINEL 3 MISSION**
*Jens Nieke, Johannes Frerick, Juergen Stroede, Constantin Mavrocordatos, Bruno Berruti*

14:00
**TH3.109.3** **STATUS OF ESA FUTURE EARTH OBSERVATION EXPLORER MISSIONS**
*Gregory Bazalgette Courrèges-Lacoste, Paolo Bensi, Michael Berger, Jean-Loup Bézy, Bernardo Carnicero Dominguez, Malcolm Davidson, Mark Drinkwater, Yannig Durand, Florence Heliere, Paul Ingmann, Joerg Langen, Chung-Chi Lin, Roland Meynart, Helge Rebhan, Pierluigi Silvestrin, Alan Thompson*

14:20
**TH3.109.4** **OPTICAL SENSING BY "SATURATION" WITH E-CORCE CONCEPT: ONE EARTH, ONE METER, ONE DAY**
*Antikidis Jean-Pierre*

14:40
**TH3.109.5** **OMPS - THE NEXT GENERATION SENSOR SUITE FOR GLOBAL OZONE MONITORING**
*Kenneth Eastman, Scott Asbury, Lester Farwell, Quinn Remund, Juan Rodriguez*

## TH3.110: Thursday, July 10, 13:20 - 15:00

**TH3.110** **Applications in Wetlands and Inland Waters I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 110
Co-Chairs: Megan Weiner Lang and Bruce Chapman

13:20
**TH3.110.1** **APPLYING MULTI-ANGLE HYPERSPECTRAL DATA TO DETECT HUMAN-INDUCED CHANGES CAUSING WETLAND DEGRADATION IN SEMI-ARID AREAS (NATIONAL PARK LAS TABLAS DE DAIMIEL, SPAIN)**
*Thomas Schmid, José Antonio Domínguez, Jesús Solana, José Gumuzzio, Magaly Koch*

13:40
**TH3.110.2** **MAPPING WETLANDS COVER TYPES WITH DIRECTIONAL POLARIZATION SIGNATURES**
*Vern C. Vanderbilt, Jonathan Greenberg, Gerald Livingston, Shruti Khanna, Leslie Morrissey, Susan L. Ustin, Ute Böttger*

14:00
**TH3.110.3** **REMOTE MEASUREMENT AND MONITORING OF INLAND WATER HEIGHTS GLOBALLY USING MULTI-MISSION SATELLITE RADAR ALTIMETRY**
*Jérôme Benveniste, Philippa Berry*

14:20
**TH3.110.4** **MOSAICKING OF ALOS PALSAR DATA FOR GLOBAL WETLANDS MAPPING**
*Bruce Chapman, Kyle McDonald, Laura Hess*

14:40
**TH3.110.5** **A REMOTE SENSING MODEL ESTIMATING LAKE EVAPORATION**
*Junming Wang, Ted Sammis, Vince Gutschick*

## TH3.111: Thursday, July 10, 13:20 - 15:00

**TH3.111** **Data Management and Systems II**
Session Type: Oral-Contributed
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 111
Chair: Hampapuram Ramapriyan



13:20
**TH3.111.1** **GEOBRAIN ONLINE RESOURCES FOR SUPPORTING COLLEGE-LEVEL DATA-INTENSIVE GEOSPATIAL SCIENCE AND ENGINEERING EDUCATION**
*Meixia Deng, Liping Di*

13:40
**TH3.111.2** **DATACASTING: INFORMED PULL OF EARTH SCIENCE DATA USING RSS**
*Andrew Bingham, Timothy Stough*

14:00
**TH3.111.3** **ESTABLISHMENT OF MAP UPDATE TECHNIQUE FOR LOCAL GOVERNMENT BY USING GPS, GIS, AND REMOTE SENSING**
*Mitoshi Moriya, Sota Shimano, Sayaka Takeuchi, Masaaki Shikada*

14:20
**TH3.111.4** **TOWARDS A STANDARD ARCHIVAL FORMAT FOR SCIENCE DATA: STORING NASA ECS DATA USING HDF5 ARCHIVAL INFORMATION PACKAGES (AIP)**
*Ruth M. Duerr, Kent (MuQun) Yang*

14:40
**TH3.111.5** **AUTOMATING THE GENERATION AND COLLECTION OF PROVENANCE FOR LONG TERM GEOSCIENCE REMOTE SENSING DATA SETS**
*Albert J. Fleig, Curt Tilmes, Mike Linda*

## TH3.203: Thursday, July 10, 13:20 - 15:00

**TH3.203** **Global Precipitation Mission I**
Session Type: Oral-Invited
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 203
Co-Chairs: Chandrasekar V. Chandra and Gail Skofronick-Jackson

13:20
**TH3.203.1** **THE GLOBAL PRECIPITATION MEASUREMENT (GPM) MISSION: OVERVIEW AND U.S. SCIENCE STATUS**
*Arthur Hou*

13:40
**TH3.203.2** **THE GLOBAL PRECIPITATION MEASUREMENT (GPM) PROJECT**
*Candace Carlisle, Ardeshir Azarbarzin*

14:00
**TH3.203.3** **SIMULATION OF SPACE BORNE DUAL-WAVELENGTH OBSERVATIONS BASED ON GROUND-BASED DUAL POLARIZED RADAR MEASUREMENTS: APPLICATION FOR GPM-DPR SYSTEM AND ALGORITHM EVALUATION**
*Direk Khajonrat, V. Chandrasekar*

14:20
**TH3.203.4** **CROSS CALIBRATION OF MICROWAVE RADIOMETERS IN THE GPM CONSTELLATION**
*Thomas Wilheit, Keiji Imaoka, Misako Kachi, Akira Shibata, Christian Kummerow, Wesley Berg, Eric Stoner, W. Linwood Jones, Kaushik Gopalan, Christopher Ruf, Darren McKague, John J. Puckett, Fuzhong Weng, Banghua Yan, Song Yang, Arthur Hou, Gail Skofronick-Jackson*

14:40
**TH3.203.5** **VICARIOUS CALIBRATION OF GLOBAL PRECIPITATION MEASUREMENT MICROWAVE RADIOMETERS**
*Darren McKague, Christopher Ruf, John J. Puckett*

## TH3.210: Thursday, July 10, 13:20 - 15:00

**TH3.210** **A Climate of Change -- NASA's Applied Sciences Program I**
Session Type: Oral-Invited
Time: Thursday, July 10, 13:20 - 15:00
Place: Room 210
Co-Chairs: Teresa Fryberger and Verne Kaupp

13:20
**TH3.210.1** **A CLIMATE OF CHANGE – NASA'S APPLIED SCIENCES PROGRAM**
*Teresa Fryberger, Lawrence Friedl*

13:40
**TH3.210.2** **APPLICATION OF NASA CLIMATE MODELS AND MISSIONS TO AGRICULTURE DSS: THE SOLUTIONS NETWORK APPROACH**
*Cynthia Rosenzweig, Radley Horton*

14:00
**TH3.210.3** **CLIMATE CHANGE AND WATER RESOURCES**
*Jared Entin, Paul Houser, C. Adam Schlosser, Charles Vorosmarty, Richard Lawford*

14:20
**TH3.210.4** **MONITORING AND FORECASTING PROTECTED AREA ECOSYSTEM DYNAMICS USING THE TERRESTRIAL OBSERVATION AND PREDICTION SYSTEM (TOPS)**
*Ramakrishna Nemani, Hirofumi Hashimoto, Petr Votava, Forrest Melton, Weile Wang, Andrew Michaelis, Cristina Milesi, Samuel Hiatt*

14:40
**TH3.210.5** **EXPANDED USE OF NASA SCIENCE FOR LAND RESOURCE DECISION MAKING: A PLAN FOR AGRICULTURE**
*Bradley Doorn*

## TH4.101: Thursday, July 10, 15:20 - 17:00

**TH4.101** **Urban Road Networks**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 101
Co-Chairs: Rob J. Dekker and Gintautas Palubinskas

15:20
**TH4.101.1** **EVALUATION OF A STATISTICAL FUSION OF LINEAR FEATURES IN SAR DATA**
*Karin Hedman, Stefan Hinz, Uwe Stilla*

15:40
**TH4.101.2** **ROAD EXTRACTION AND NETWORK BUILDING FROM SYNTHETIC APERTURE RADAR IMAGES USING A-PRIORI INFORMATION**
*Rob Dekker*

16:00
**TH4.101.3** **ROAD VEHICLE DETECTION AND CLASSIFICATION FROM VERY-HIGH-RESOLUTION COLOR DIGITAL ORTHOIMAGERY BASED ON OBJECT-ORIENTED METHOD**
*Qulin Tan, Jinfei Wang, David Andrew Aldred*

16:20
**TH4.101.4** **ROAD NETWORK DETECTION IN URBAN AREA FROM HIGH-RESOLUTION SATELLITE IMAGES**
*Xiaofang Li, Qulin Tan*

16:40
**TH4.101.5** **SURVEY AND ANALYSIS OF LAND SATELLITE REMOTE SENSING APPLIED IN TRANSPORTATIONS INFRASTRUCTURE AND SYSTEM ENGINEERING**
*Guoqing Zhou, Daiyong Wei*

## TH4.102: Thursday, July 10, 15:20 - 17:00

**TH4.102** **SAR Polarimetry: Theory and Applications II**
Session Type: Oral-Invited
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 102
Co-Chairs: Carlos Lopez-Martinez and Eric Pottier



15:20
**TH4.102.1** **POLARIMETRIC AND POLARIMETRIC-INTERFEROMETRIC APPLICATIONS OF THE NASA/JPL UAVSAR**
*Scott Hensley, Howard Zebker, Bruce Chapman, Charles Le, Cathleen Jones, Thierry Michel, Paul Rosen, Marc Simard*

15:40
**TH4.102.2** **POLARIMETRIC SCATTERING ANALYSIS FOR SIMPLIFIED MAN-MADE STRUCTURE MODEL ON ROUGH AND/OR INCLINED GROUND PLANE**
*Ryoichi Sato, Yoshio Yamaguchi, Hiroyoshi Yamada*

16:00
**TH4.102.3** **ESTIMATION OF THE EQUIVALENT NUMBER OF LOOKS IN POLARIMETRIC SAR IMAGERY**
*Stian Normann Anfinsen, Anthony Doulgeris, Torbjørn Eltoft*

16:20
**TH4.102.4** **HYBRID-QUAD-POL SAR**
*R. Keith Raney*

16:40
**TH4.102.5** **IMPROVING RANGE AMBIGUITY PERFORMANCE IN QUAD-POL SAR**
*Anthony Freeman, R. Keith Raney*

## TH4.103: Thursday, July 10, 15:20 - 17:00

**TH4.103** **Active Remote Sensing of the Cryosphere II**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 103
Co-Chairs: Helmut Rott and Simon Yueh

15:20
**TH4.103.1** **P-BAND POLARIMETRIC ICE SOUNDER: CONCEPT AND FIRST RESULTS**
*Jorgen Dall, Carlos Cilla Hernández, Anders Kusk, Jan Balling, Steen Savstrup Kristensen*

15:40
**TH4.103.2** **A VHF RADAR FOR DEPLOYMENT ON A UAV FOR BASAL IMAGING OF POLAR ICE**
*William Blake, John Ledford, Chris Allen, Carl Leuschen, Sivaprasad Gogineni, Fernando Rodriguez-Morales, Lei Shi, Kevin Player*

16:00
**TH4.103.3** **SAR IMAGE ANALYSIS TO ESTIMATE FREEZE-THAW DATES FOR A HIGH LATITUDE LAKE IN ALASKA**
*Avinash Uppuluri, Randy Jost, Chris Luecke, Michael White*

16:20
**TH4.103.4** **SIMULATION OF ASIRAS MULTILOOKED ECHOES FOR SNOW COVERED SEA ICE**
*Marko Mäkynen, Martti Hallikainen*

16:40
**TH4.103.5** **AN OVERVIEW OF THE GEOPHYSICAL VARIABLES CAUSING ICE ROUGHNESS STRUCTURES TO BE DETECTED ON SAR IMAGES.**
*Eric Hudier*

## TH4.104: Thursday, July 10, 15:20 - 17:00

**TH4.104** **Change Detection in Urban Landscapes I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 104
Co-Chairs: Paolo Gamba and Megan Lang

15:20
**TH4.104.1** **MONITORING AND MODELING URBAN LAND-USE CHANGE WITH MULTITEMPORAL SATELLITE DATA**
*Roland Goetzke, Matthias Braun, Hans-Peter Thamm, Gunter Menz*

15:40
**TH4.104.2** **X-BAND INSAR OBSERVATIONS IN NEW ORLEANS, LOUISIANA**
*Sang-Wan Kim, Shimon Wdowinski, Falk Amelung, Timothy H. Dixon, Sang-Hoon Hong*

16:00
**TH4.104.3** **A CRITICAL ANALYSIS TO GENERATE CHANGE DETECTION MAP USING SAR INTERFEROMETRY FOR LAND SUBSIDENCE MONITORING OF NEW ORLEANS CITY OF USA**
*Vijaya Chamundeeswari, Dharmendra Singh, Kuldip Singh, Werner Weisbeck*

16:20
**TH4.104.4** **PER PIXEL CONTEXTUAL INFORMATION FOR CLASSIFICATION OF VHR IMAGES OF URBAN AREAS**
*Rik Bellens, Koen Douterloigne, Sidharta Gautama, Wilfried Philips*

16:40
**TH4.104.5** **DEVELOPING AN APPROACH TO DETECT URBAN EXPANSION BY USING LANDSAT 7 ETM+ PANCHROMATIC DATA**
*Qingxu Huang, Chunyang He, Peijun Shi, Yuanyuan Zhao, Yang Yang*

## TH4.105: Thursday, July 10, 15:20 - 17:00

**TH4.105** **Surface Temperature and Salinity I**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 105
Co-Chairs: Adriano Camps and Sten Schmidl Søbjærg

15:20
**TH4.105.1** **PRECISE SST FOR CLIMATE APPLICATIONS FROM THE ADVANCED ALONG-TRACK SCANNING RADIOMETER (AATSR) ON ENVISAT.**
*David Llewellyn-Jones, Gary Corlett*

15:40
**TH4.105.2** **REGIONAL FUSED SEA SURFACE TEMPERATURE SYSTEM FOR THE GULF OF MAINE**
*Nadya Vinogradova, T. Scott Zaccheo, Christian Alcala, Doug Vandemark*

16:00
**TH4.105.3** **GROUND-BASED GNSS-R MEASUREMENTS WITH THE PAU INSTRUMENT AND THEIR APPLICATION TO THE SEA SURFACE SALINITY RETRIEVAL: FIRST RESULTS**
*Juan Fernando Marchán-Hernandez, Nereida Rodríguez-Álvarez, Adriano Camps, Isaac Ramos-Pérez, Enric Valencia, Xavier Bosch-Lluis*

16:20
**TH4.105.4** **EXTENDED OCEAN SALINITY ERROR BUDGET ANALYSIS WITHIN THE SMOS MISSION**
*Roberto Sabia, Adriano Camps, Mercè Vall-llossera*

16:40
**TH4.105.5** **AIRBORNE L-BAND RADIOMETER OBSERVATIONS OF SEA SURFACE SALINITY GRADIENTS AND AZIMUTH SIGNATURES.**
*Sten Schmidl Søbjærg, Niels Skou*

## TH4.107: Thursday, July 10, 15:20 - 17:00

**TH4.107** **Image Analysis and Classification - Quality Issues**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 107
Co-Chairs: Chi Hau Chen and Luca Capobianco



15:20
**TH4.107.1** **A GENETIC AUTOMATIC GROUND-TRUTH VALIDATION METHOD FOR MULTISPECTRAL REMOTE SENSING IMAGES**
*Noureddine Ghoggali, Farid Melgani*

15:40
**TH4.107.2** **A METHOD FOR SELECTING TRAINING DATA AND ITS EFFECT ON AUTOMATED LAND COVER MAPPING OF LARGE AREAS**
*Rene R. Colditz, Michael Schmidt, Rainer Ressl, Matthew C. Hansen, Stefan Dech*

16:00
**TH4.107.3** **GENERATING HIGH-QUALITY TRAINING DATA FOR AUTOMATED LAND-COVER MAPPING**
*Umaa Rebbapragada, Rachel Lomasky, Carla Brodley, Mark Friedl*

16:20
**TH4.107.4** **DEM ACCURACY REQUIREMENTS FOR RELIABLE ORTHORECTIFICATION OF SAR AND OPTICAL DATA**
*Leland Pierce*

16:40
**TH4.107.5** **MODEL FREE EARTH OBSERVATION IMAGE ARTIFACTS DETECTION**
*Alexandre Mallet, Mihai Datcu*

## TH4.108: Thursday, July 10, 15:20 - 17:00

**TH4.108** **SAR Processing II**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 108
Co-Chairs: Charles Werner and Beatrice Pinel-Puyssegur

15:20
**TH4.108.1** **RADAR BACKSCATTERING MEASUREMENTS OF PADDY RICE FIELD USING MULTIFREQUENCY(L, C AND X) AND FULL POLARIZATION**
*Yi Hyun Kim, Sukyoung Hong, Jisung Park, Eunsun Lee, Hoonyol Lee*

15:40
**TH4.108.2** **COMPARISON BETWEEN SAR ATMOSPHERIC PHASE SCREENS AT 30' BY MEANS OF ERS AND ENVISAT DATA**
*Daniele Perissin, Claudio Prati*

16:00
**TH4.108.3** **THE IMPACT OF ADAPTIVE SPECKLE FILTERING ON MULTI-CHANNEL SAR CHANGE DETECTION**
*Jason Fritz, V. Chandrasekar*

16:20
**TH4.108.4** **PERFORMANCE EVALUATION OF MULTIVARIATE INTERPOLATION METHODS FOR SCATTERED DATA IN GEOSCIENCE APPLICATIONS**
*Matthew Foster, Adrian Evans*

16:40
**TH4.108.5** **DESIGN AND ANALYSIS OF UWB TEM HORN ANTENNA FOR GROUND PENETRATING RADAR APPLICATIONS**
*Chine-Ping Kao, Jing Li, Richard Liu*

## TH4.109: Thursday, July 10, 15:20 - 17:00

**TH4.109** **Technologies for Hyperspectral Imaging**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 109
Co-Chairs: Alex Held and John Cipar

15:20
**TH4.109.1** **LABORATORY-BASED BRDF OF SOIL SAMPLES FOR REMOTE SENSING**
*Georgi Georgiev, Charles Gatebe, James Butler, Michael King*

15:40
**TH4.109.2** **ON THE USE OF THIN PLASTIC FILMS AS GAS-PHASE ANALOG TARGETS**
*Ronald Resmini, Herbert Mitchell*

16:00
**TH4.109.3** **SIGNAL TO NOISE RATIO FOR SPECTRAL SENSORS WITH OVERLAPPING BANDS**
*Zhipeng Wang, J. Scott Tyo*

16:20
**TH4.109.4** **AN ARTIFICIAL WOODLAND SCENE MODEL FOR SIMULATION OF HYPERSPECTRAL IMAGING SYSTEM**
*Bin Zou, Guihua Gu, Donglai Chen, Huijun Li*

16:40
**TH4.109.5** **HYDROCARBON DETCTION USING A PLURALITY OF SPECTRAL BANDS**
*A. Ballard Andrews, Wei-Chuan Shih*

## TH4.110: Thursday, July 10, 15:20 - 17:00

**TH4.110** **Pollution Monitoring**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 110
Co-Chairs: Daniela Vladutescu and Ferdinand Nunziata

15:20
**TH4.110.1** **AEROSOL LAYER PROPERTIES AND THEIR EFFECT ON OPTICAL DEPTH RELATIONS TO PM2.5 CONCENTRATIONS**
*Viviana Vladutescu, Julian Diaz, Leona Charles, Barry Gross, Fred Moshary, Samir Ahmed*

15:40
**TH4.110.2** **A BPM TWO-SCALE CONTRAST MODEL**
*Ferdinando Nunziata, Piotr Sobieski, Maurizio Migliaccio*

16:00
**TH4.110.3** **IDENTIFICATION OF ROADS FOR URBAN RUNOFF POLLUTION MANAGEMENT**
*Mi-Hyun Park, Michael Stenstrom*

16:20
**TH4.110.4** **SEASONAL EVALUATION OF TEMPERATURE INVERSION OVER CAIRO**
*Mohamed Abd El-Kader, Basman El Hadidi, Atef Sherif*

16:40
**TH4.110.5** **MONITORING OF OIL SPILLS IN THE NORTH CASPIAN SEA USING SAR IMAGERY AND MULTI-SENSOR SATELLITE DATA**
*Konstantin Litovchenko, Andrei Ivanov*

## TH4.111: Thursday, July 10, 15:20 - 17:00

**TH4.111** **Data Management and Systems III**
Session Type: Oral-Contributed
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 111
Co-Chairs: Robert Rank and Andrew Bingham

15:20
**TH4.111.1** **THE NPOESS PREPARATORY PROJECT SCIENCE DATA SEGMENT: THE FINAL AS BUILT DESCRIPTION**
*Robert J. Schweiss, Mary Hunter, Shahin Samadi*

15:40
**TH4.111.2** **THE NPOESS PREPARATORY PROJECT (NPP) SCIENCE DATA SEGMENT (SDS) DATA DEPOSITORY AND DISTRIBUTION ELEMENT (SD3E) SYSTEM ARCHITECTURE**
*Evelyn L. Ho, Robert J. Schweiss*

16:00
**TH4.111.3** **EXPERIENCES DEVELOPING OAIS-RM RECOMMENDED SUBMISSION AGREEMENTS**
*Robert Rank, Constantino Cremidis, Scott McCormick, Jeremy Throwe*

16:20
**TH4.111.4** **NASA'S EARTH SCIENCE DATA SYSTEMS STANDARDS PROCESS**
*Richard Ullman, Yonsook Enloe*

16:40
**TH4.111.5** **CLIMATE DATA PROCESSING MADE EASY**
*Scott Mindock*

## TH4.203: Thursday, July 10, 15:20 - 17:00

**TH4.203** **Global Precipitation Mission II**
Session Type: Oral-Invited
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 203
Co-Chairs: Chandrasekar V. Chandra and Gail Skofronick-Jackson

15:20
**TH4.203.1** **THE NEXT GENERATION OF PASSIVE MICROWAVE RAIN RETRIEVALS IN THE GPM ERA**
*Kyle Hilburn, Frank Wentz*

15:40
**TH4.203.2** **GSMAP PASSIVE MICROWAVE PRECIPITATION RETRIEVAL ALGORITHM: ALGORITHM DESCRIPTION AND VALIDATION**
*Kazumasa Aonashi*

16:00
**TH4.203.3** **GPM PRE-LAUNCH ALGORITHM DEVELOPMENT FOR PHYSICALLY-BASED FALLING SNOW RETRIEVALS**
*Gail Skofronick-Jackson, Ali Tokay, Anne Kramer, David Hudak*

16:20
**TH4.203.4** **MICROPHYSICAL ANALYSIS OF SNOWFALL EVENTS DURING C3VP**
*Robert Cifelli, Timothy Lang, Steven Rutledge, V. Bringi, Walter Petersen, Roger Shi, Wei-Kuo Tao, Steve Lang, David Hudak*

16:40
**TH4.203.5** **RAIN AND SNOWFALL RETRIEVALS AT HIGH LATITUDES USING MILLIMETER WAVELENGTHS**
*Chinnawat Surussavadee, David Staelin*

## TH4.210: Thursday, July 10, 15:20 - 17:00

**TH4.210** **A Climate of Change -- NASA's Applied Sciences Program II**
Session Type: Oral-Invited
Time: Thursday, July 10, 15:20 - 17:00
Place: Room 210
Co-Chairs: Teresa Fryberger and Verne Kaupp

15:20
**TH4.210.1** **NASA SCIENCE SERVING SOCIETY: IMPROVING CAPABILITIES FOR FIRE CHARACTERIZATION TO EFFECT REDUCTION IN DISASTER LOSSES**
*Vincent Ambrosia, Everett Hinkley*

15:40
**TH4.210.2** **MERGING MODELS WITH OBSERVATIONS FOR EARTH MONITORING DATA FOR EARLIER FAMINE EARLY WARNING**
*Molly Brown, Christopher Funk, Richard Choularton, James Verdin*

16:00
**TH4.210.3** **USING REFLECTANCE MEASUREMENTS TO DETERMINE LIGHT USE EFFICIENCY IN CORN**
*Karl Huemmrich, Lawrence Corp, Andrew Russ, Elizabeth Middleton, William P. Kustas, John Prueger, Yen-Ben Cheng*

16:20
**TH4.210.4** **VARIATION OF EVAPOTRANSPIRATION IN THE NORTHWEST OF MEXICO AND ITS EFFECT ON THE CLIMATE CHANGE**
*Judith Ramos, Ildiko Pelczer, Fernando González Villareal*

16:40
**TH4.210.5** **MONITORING OF SUMMER HIGH TEMPERATURE BY USING MODIS DATA**
*Hao Yan, Jiahua Zhang*

## THP.A: Thursday, July 10, 17:00 - 18:30

**THP.A** **Change Detection in Forested Landscapes II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area A
Co-Chairs: Matthieu Molinier and Vern Vanderbilt

**THP.A.1** **IMPACT OF LAND-USE CHANGES ON SOIL EROSION IN UPPER REACHES OF SHIYANG RIVER IN ARID NORTHWEST CHINA**
*Guojing Yang, Yongjian Ding, Lihua Zhou*

**THP.A.2** **STUDY ON ECO-ENVIRONMENTAL DEGRADATION AND SUSTAINABLE DEVELOPMENT IN MADOI COUNTY, YELLOW RIVER SOURCE REGIONS, CHINA**
*Wenrui Wang, Yu Cheng, Chunhui Zhang, Chunhua Li, Junsheng Nie*

**THP.A.3** **CLEARCUT MAPPING FOR SUSTAINABLE FOREST MANAGEMENT USING TERRASAR-X IMAGERY**
*Matthieu Molinier, Yrjö Rauste, Tuomas Häme*

**THP.A.4** **ASSESSING LAND COVER PERFORMANCE IN THE GRAND CANAL OF CHINA USING SPOT DATA**
*Jianxi Huang, Feng Mao, Wenbo Xu, Zhihua Tang*

## THP.B: Thursday, July 10, 17:00 - 18:30

**THP.B** **Change Detection in Land Use / Land Cover II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area B
Co-Chairs: Ray Hunt and Marc Imhoff

**THP.B.1** **INTEGRATION OF SPATIAL CHAOTIC MODEL AND TYPE-2 FUZZY SETS FOR SAR IMAGES CHANGE DETECTION**
*Yu-Chang Tzeng, Dana Chen, Kun-Shan Chen*

**THP.B.2** **LAND COVER CHANGE DETECTION WITH MULTI-POLARIZATION SAR IMAGERY**
*Fan Wu, Xi Chen, Chao Wang, Hong Zhang, Bo Zhang, Yixian Tang*

**THP.B.3** **THE USE OF REMOTE SENSING DATA FOR MODELING DIFFERING LEVELS OF GRASSLAND IMPROVEMENT WITHIN THE WELSH LANDSCAPE**
*Johanna Breyer, Richard Lucas, Katie Medcalf, Peter Bunting*

**THP.B.4** **OBJECT-ORIENTED APPROACH AND TEXTURE ANALYSIS FOR CHANGE DETECTION IN VERY HIGH RESOLUTION IMAGES**
*Antoine Lefebvre, Thomas Corpetti, Laurence Hubert-Moy*

**THP.B.5** **COMPARISON OF TWO APPROACHES ON TERRAIN CHANGE DETECTION AND UPDATING**
*Song Xia, Huanzhuo Ye, Laixing Liu*

**THP.B.6** **SPATIAL CHANGES OF MINQIN OASIS IN THE NORTHWEST CHINA OVER THE LAST 2000 YEARS**
*Yaowen Xie, Fahu Chen, Yuan Qi*

**THP.B.7** **FRACTAL STUDIES ON CHANGES OF LAND USE STRUCTURE AND URBAN FORM IN TIANJIN CITY**
*Xinping Bai*

**THP.B.8** **CHANGE DETECTION OF REMOTE SENSING IMAGE BASED ON ORIENTED-OBJECT AND SUPPORT VECTOR MACHINE**
*Di Fengping, Zhu Chongguang, Liu Yani*

**THP.B.9** **INTEGRATION OF RADARSAT-2 DUAL AND QUAD POLARIZATION DATA INTO PIPELINE THIRD PARTY ENCROACHMENT MONITORING**
*Carl Howell, Karen Russell, Sherry McHugh, Desmond Power, Thomas Puestow, Charles Randell*

## THP.C: Thursday, July 10, 17:00 - 18:30

**THP.C** **Change Detection in Urban Landscapes II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area C
Co-Chairs: Weiqi Zhou and Florence Tupin

**THP.C.1** **AGENT-BASED APPROACHES TO LAND USE CHANGE IN EASTERN CHINA**
*Chang-Qing Ke*

**THP.C.2** **A COMPARISON OF OBJECT-ORIENTED WITH PIXEL-BASED LAND COVER CHANGE DETECTION IN THE BALTIMORE METROPOLITAN AREA USING MULTITEMPORAL HIGH RESOLUTION REMOTE SENSING DATA**
*Weiqi Zhou, Austin Troy, Morgan Grove*

**THP.C.3** **A STUDY ON THE CLASSIFICATION OF URBAN REGION USING HYPER-SPECTRUM DATA AT AVIRIS**
*Yuichiro Amano, Naoki Takagi*

**THP.C.4** **STUDY ON LAND USE AND LAND COVER CHANGE WITH THE INTEGRATION OF RS, GIS AND GPS TECHNOLOGIES--THE CASE OF BAOTOU CITY IN THE ECOTONE OF AGRICULTURE-ANIMAL HUSBANDRY, CHINA**
*Yu Cheng, Gang Li, Chunhui Zhang, Wenrui Wang, Junsheng Nie*

**THP.C.5** **MONITORING URBAN EXPANSION IN BEIJING, CHINA BY MULTI-TEMPORAL TM AND SPOT IMAGES**
*Wenli Huang, Huiping Liu, Qingzu Luan, Mu Bai*

**THP.C.6** **BEIJING CITY LAND USE DYNAMIC MONITORING USING MULTI-TEMPORAL SPOT DATA FROM 1986 TO 2004**
*Xianlong Zhu, Feng Mao, Jianxi Huang*

**THP.C.7** **EXPLORING THE 3D SPATIAL DISTRIBUTION OF CULTURAL PRINTS USING REMOTE SENSING AND GISCIENCE: "ISTANBUL: THE CITY ON SEVEN HILLS"**
*Yaprak Has*

**THP.C.8** **LAND USE DYNAMIC CHANGES AND ECOLOGICAL EFFECT IN THE JIAODONG REGION, CHINA**
*Wenchen Jia, Juanle Wang, Chongliang Sun*

**THP.C.9** **DYNAMIC SIMULATION ON THE SPATIO-TEMPORAL PATTERNS OF LAND USE IN THE AREA OF CONTINUED HYDROPOWER STATION CONSTRUCTION IN THE UPPER REACH OF YELLOW RIVER**
*Dan Wang, Hongguang Cheng, Fanghua Hao, Ayan Zeng, Jiayu Wu, Li Gong*

**THP.C.10** **STUDIES ON THE CHANGES AND DRIVING FORCES OF LANDSCAPE PATTERN OF URBAN LAND USE IN TIANJIN CITY**
*Xinping Bai*

**THP.C.11** **ANALYSIS OF LAND USE AND LANDSCAPE PATTERN IN BEIJING CITY BASED ON GIS**
*Ronghua Wang, Xiaojuan Li, Yonghua Sun, Jian Lian*

## THP.D: Thursday, July 10, 17:00 - 18:30

**THP.D** **Land Use/Land Cover Classification I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area D
Co-Chairs: Lorenzo Bruzzone and Laurence Hubert-Moy

**THP.D.1** **ASSESSMENT OF SUITABILITY OF LAND USES USING A MULTI-SOURCE INFORMATION FUSION METHOD**
*Lei Wang, Xiangzheng Deng, Jinyan Zhan, Yujiang Li, Hongbo Su*

**THP.D.2** **VEGETATION DYNAMICS IN ARID AND SEMI-ARID ECOTONE – A CASE STUDY IN YANCHI COUNTY**
*Yuan Qi, Changzhen Yan, Jianhua Wang, Zhen Xu*

**THP.D.3** **TASSELED TAP TRANSFORMATION AND NEURAL NETWORKS FOR THE DESIGN OF AN OPTIMUM IMAGE CLASSIFICATION ALGORITHM USING MULTISPECTRAL DATA**
*Giorgio Licciardi, Cosimo Putignano, Fabio del Frate*

**THP.D.4** **AN OBJECT-ORIENTED APPROACH OF EXTRACTING SPECIAL LAND USE CLASSIFICATION BY USING QUICK BIRD IMAGE**
*Wenbo Xu, Guoping Zhang, Jianxi Huang*

**THP.D.5** **DETECTION OF WOODED HEDGEROWS IN HIGH RESOLUTION SATELLITE IMAGES USING AN OBJECT-ORIENTED METHOD**
*Clémence Vannier, Laurence Hubert-Moy*

**THP.D.6** **NEURAL NETWORKS AND SUPPORT VECTOR MACHINES FOR THE CLASSIFICATION OF SATELLITE IMAGERY: A COMPARATIVE ANALYSIS FOR LAND COVER MAPS**
*Fabio Del Frate, Fabio Pacifici, Roberto Basili, Matteo Luciani, Francesco Mesiano, Rossi Riccardo*

**THP.D.7** **HIGH RESOLUTION REMOTE SENSING BASED QUANTIFICATION OF THE REMNANT VEGETATION COVER IN THE ARAGUAIA RIVER BASIN, CENTRAL BRAZIL**
*Manuel Ferreira, Laerte Ferreira, Edgardo Manuel Latrubesse, Fausto Miziara*

**THP.D.8** **LAND COVER CLASSIFICATION USING MULTITEMPORAL CHRIS/PROBA IMAGES AND MULTITEMPORAL TEXTURE**
*Huiran Jin, Peijun Li, Wenjie Fan*

**THP.D.9** **SOUTHERN ITALY BURN SCAR MAPPING BY MYME2 PROCEDURE USING IRS P6 LISS3**
*Barbara R. Hirn, Fabrizio Ferrucci*

**THP.D.10** **ECO-ENVIRONMENTAL SYNTHETIC ANALYSIS BASED ON RS AND GIS TECHNOLOGIES IN YELLOW RIVER BASIN, CHINA**
*Siyuan Wang, Kun Fu, Wudi Wang, Chuanzhao Han, Tengbo Ma, Xingyu Fu*

**THP.D.11** **RBF NEURAL NETWORK SUPPORTED CLASSIFICATION OF REMOTE SENSING IMAGES BASED ON TM/ETM+ IN NANJING**
*Kai Cao, Bo Huang, Heng Lu, Biao Liu*

## THP.E: Thursday, July 10, 17:00 - 18:30

**THP.E** **Land Use/Land Cover Classification II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area E
Co-Chairs: Mahta Moghaddam and Brian Markham

**THP.E.1** **EXPANSION SCENARIOS OF THE BIOFUEL AGRIBUSINESS OVER SAVANNA AREAS IN CENTRAL BRASIL**
*Noely Ribeiro, Laerte Ferreira, Nilson Ferreira*

**THP.E.2** **REGIONAL LAND DEGRADATION MAPPING BY DECISION TREE (DT) AND MODIS DATA IN A TRANSITION ZONE BETWEEN GRASSLAND AND CROPLAND OF NORTHEAST CHINA**
*Shengbo Chen, Ping Rao*

**THP.E.3** **IMPACT OF ECOLOGICAL RESTORATION PROJECT ON VEGETATION VARIATION: A CASE STUDY IN NINGXIA PROVINCE, CHINA**
*Hao Yan*

**THP.E.4** **THE MONITORING AND EFFECT EVALUATION OF RESTORING GRAZING TO GRASSLAND PROJECT IN MAQU COUNTY OF CHINA BASED ON EOS/MODIS DATA**
*Jing Wang, Ni Guo, Xiaoping Wang, Jinsong Wang, Jie Zhang*

**THP.E.5** **RESEARCH ON THE LAND DESERTIFICATION OF BEIJING PIEDMONT PLAIN AREA BASED ON REMOTE SENSING TECHNOLOGY**
*Wenji Zhao, Ke Liu, Songmei Zhang, Zhuo-Wei Hu, Zhaoning Gong, Feina Lin, Hua Zhang, Yi Zheng*

**THP.E.6** **EVALUATION OF MODIS LAND COVER PRODUCT OF EAST CHINA**
*Haobo Lin, Jindi Wang, Xiuping Jia, Yanchen Bo, Dongwei Wang*

**THP.E.7** **LAND COVER CLASSIFICATION IN QINLING MOUNTAINS IN CHINA, USING TIME-SERIES MODIS NDVI DATA**
*Quanfang Wang, Li Xiao, Jiayong Li, Xin Mei*

## THP.F: Thursday, July 10, 17:00 - 18:30

**THP.F** **Land Use/Land Cover Classification III**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area F
Co-Chairs: Vassilia Karathanassi and William Crosson

**THP.F.1** **FROM MULTI-SPECTRAL TO HYPER-SPECTRAL IMAGERY: A QUANTITATIVE ANALYSIS OF THE IMPROVEMENTS IN TERMS OF LAND COVER CLASSIFICATION**
*Riccardo Duca, Fabio Del Frate, Ferran Gascon Roca*

**THP.F.2** **A METHOD TO ESTIMATE LAND COVER CHANGES BY USING CBERS2-CCD DATA AND GIS DATA**
*Wenbo Xu, Zou Jinqiu, Jianxi Huang*

**THP.F.3** **ANALYSIS OF TEMPORAL LAND COVER CHANGE USING THE ESA ROLLING ARCHIVES**
*Maurice Borgeaud, Matthias Tschudi*

**THP.F.4** **EXTRACTING LAND USE INFORMATION FROM BEIJING-1 MICRO-SATELLITE IMAGES**
*Cunjian Yang, Rong He*

**THP.F.5** **STUDIES ON THE CHANGE OF LAND USE/COVER AND ECOSYSTEM SERVICE VALUES OF THREE-BELT OF MOUNTAIN_OASIS_DESERT IN THE NORTHWESTERN CHINA**
*Bo Li, Jian-Zhai Wu, Jie Chong, Li-Xia Hao, Xiao-Yuan Song, Xin-Shi Zhang*

**THP.F.6** **LAND COVER SEGMENTATION OF ALOS POLARIMETRIC SAR DATA**
*Mohammed Dabboor, Vassilia Karathanassi, Alexander Braun*

**THP.F.7** **INTERPOLATING THE INFORMATION OF SITE-BASED SOIL ORGANIC CARBON STOCKS INTO SURFACE: A CASE STUDY IN THE NORTH CHINA PLAIN**
*Jinyan Zhan, Nana Shi, Xiangzheng Deng, Hongbo Su, Dongsheng Qiu*

## THP.G: Thursday, July 10, 17:00 - 18:30

**THP.G** **Applications in Land Use / Land Cover Characterization I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area G
Chair: Lori Mann Bruce

**THP.G.1** **INTERFEROMETRIC DATA FUSION FOR TOPOGRAPHIC PROFILE RECONSTRUCTION**
*Ferdaous Chaabane*

**THP.G.2** **STUDY ON THE INTEGRATED INDICATORS OF THE ECOLOGICAL ENVIRONMENT EVALUATION ON KARST ROCK DESERTIFICATION**
*Xiaoping Gu, Fei Yu, Yuxiang Luo, Jianguo Mo*

**THP.G.3** **A MARKOV RANDOM FIELD MODEL-BASED FUSION APPROACH TO SEGMENTATION OF SAR AND OPTICAL IMAGES**
*Yi Yang, Chongzhao Han, Deqiang Han*

**THP.G.4** **APPROXIMATION ERROR IN DIFFERENTIAL SAR INTERFEROMETRY**
*Xilong Sun, Anxi Yu, Bin Cai, Diannong Liang*

**THP.G.5** **REMOTE SENSING DETECTION FOR COAL MINING SUBSIDENCE-RESULTED WATER BODY BY MODIFIED NDWI INDEX**
*Baodong Ma, Lixin Wu, Shanjun Liu*

**THP.G.6** **VERY HIGH RESOLUTION INTERFEROGRAM ACQUISITION CAMPAIGN AND ANALYSIS**
*Xavier Dupuis, Hélène Oriot*

**THP.G.7** **RELATIVE RADIOMETRIC NORMALIZATION OF REMOTELY SENSED IMAGES BASED ON IMPROVED ASCR**
*Xiaomin Yu, Yunhao Chen, Siyuan Liu*

## THP.H: Thursday, July 10, 17:00 - 18:30

**THP.H** **Applications in Land Use / Land Cover Characterization II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area H
Co-Chairs: Zhuowei Hu and Andrew French

**THP.H.1** **IMPACTS OF LAND USE AND COVER CHANGE ON ECOSYSTEM SERVICES VALUE**
*Cheng Zhang, Xiaobing Li, Li Zhang, Lingmei Huang, Yongqin Ge*

**THP.H.2** **THEMATIC INFORMATION EXTRACTION FROM IKONOS IMAGERY BASED ON OBJECTS AND VARIOUS FEATURES**
*Deyong Hu, Wenji Zhao, Huili Gong, Xiaojuan Li, Jiacun Li*

**THP.H.3** **LAND-USE/COVER MAPPING AND CHANGE DETECTION IN THE RUSTENBURG MINING REGION USING LANDSAT IMAGES**
*Olusola Ololade, Harold Annegarn, Daniel Limpitlaw, Melanie Kneen*

**THP.H.4** **RESEARCH OF THE RESPONSE OF ECOSYSTEM TO LUCC IN BEIJING BASED ON ECOSYSTEM SERVICES VALUATION**
*Xu Xu, Xiaobing Li, Dandan Wang, Yongqin Ge, Chao Li*

**THP.H.5** **ECOCLIMAP-II ON EUROPE**
*Stéphanie Faroux, Jean-Louis Roujean, Valéry Masson*

**THP.H.6** **LAND USE SUPERVISION AND MANAGEMENT BASED ON REMOTE SENSING IMAGE EVIDENCE**
*Lijun Zhang, Qiu Li, Yuan Zhou, Changao Shi*

**THP.H.7** **PREDICTING SOIL ORGANIC CARBON DYNAMICS IN A REGIONAL LEVEL UNDER VARIOUS SCENARIOS USING DATA ASSIMILATION STRATEGY: A CASE STUDY IN THE NORTH CHINA PLAIN**
*Xiangzheng Deng, Jinyan Zhan, Lei Wang, Hongbo Su, Huimin Yan*

**THP.H.8** **A MODULAR STANDARD FOR THE CHINESE CADASTRAL DOMAIN**
*Weiwei Zhang, Qingyun Du, Zhongjun Zhao, Yan Guo, Hong Wang*

**THP.H.9** **ANALYSIS ON ALBEDO IN ARID REGION WITH ASYMMETRY SURFACE IN NORTHWEST CHINA FROM MODIS**
*Jie Zhang, Jin Song Wang, Jing Wang, Xiao Ping Wang, Run Yuan Wang*

**THP.H.10** **HOUSING SPATIAL INFORMATION ACQUISITION AND MANAGEMENT BASED ON 3S**
*Yan-Bing Wang, Huili Gong, Yan-Hui Wang, Zhuo-Wei Hu*

**THP.H.11** **HOUSEBREAKING COST EVALUATION SYSTEM BASED ON REMOTE SENSING IMAGE**
*Lijun Zhang, Qiu Li, Yuan Zhou, Changao Shi*

## THP.I: Thursday, July 10, 17:00 - 18:30

**THP.I** **Retrieval of Water and Energy Balance Parameters I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area I
Co-Chairs: John Galantowitz and Kaicun Wang

**THP.I.1** **SPATI-TEMPORAL CHANGES OF NDVI AND THEIR RELATIONS WITH PRECIPITATION AND TEMPERATURE IN YANGTZE RIVER BASIN FROM 1981 TO 2001**
*Li Zhang, Xiaoling Chen*

**THP.I.2** **ASSESSING THE IMPACTS OF CULTIVATED LAND LOSS AND CLIMATE CHANGE ON CULTIVATED LAND POTENTIAL PRODUCTIVITY IN BEIJING, CHINA**
*Yuanyuan Zhao, Chunyang He, Xiaobing Li, Qingxu Huang, Yang Yang*

**THP.I.3** **SIMULATING POSSIBLE INFLUENCE OF CLIMATE DROUGHT TRANSITION ON LAND USE IN THE FARMING-PASTORAL ZONE OF NORTHERN CHINA**
*Xiaobing Li, Hong Wang, Huiling Long, Xu Xu, Cheng Zhang*

**THP.I.4** **A GIS-BASED LOCAL SPATIAL AUTOCORRELATION FOR DROUGHT RISK ASSESSMENT USING REMOTELY SENSED IMAGERY IN ARID ENVIRONMENTS**
*Meng-Lung Lin, Chien-Min Chu, Cheng-Wu Chen, Yu Cao, Jyh-Yi Shih, Yung-Tan Lee, Lih-Der Ho*

**THP.I.5** **MONITORING DROUGHT DYNAMICS IN THE EJIN OASIS USING DROUGHT INDICES FROM MODIS DATA**
*Meng-Lung Lin, Yu Cao, Chung-Hsin Juan, Cheng-Wu Chen, I-Chen Hsueh, Qiu-Bing Wang, Yung-Tan Lee*

**THP.I.6** **UNDERSTANDING THE RELATIONSHIPS BETWEEN LAND SURFACE TEMPERATURE AND REMOTE SENSING INDICES USING MULTIVARIATE STEPWISE REGRESSION METHODS AND REMOTE SENSING TECHNIQUES**
*Chung-Hsin Juan, Chia-Kai Yang, Chih-Hung Tan, Meng-Lung Lin*

**THP.I.7** **MONITORING OF GROUND SURFASE CONDITIONS OF OASES AROUND THE TARIM BASIN, CHINA**
*Ayshamgul Wayit, Katsuaki Koike, Muhtar Qong*

## THP.J: Thursday, July 10, 17:00 - 18:30

**THP.J** **Applications in Wetlands and Inland Waters II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area J
Co-Chairs: Jerome Benveniste and James Smith

**THP.J.1** **SIMULATING THE EFFECTS OF WETLAND LOSS AND INTER-ANNUAL VARIABILITY ON THE FITNESS OF MIGRATORY BIRD SPECIES**
*James A. Smith, Jill L. Deppe*

**THP.J.2** **REMOTE SENSING RETRIEVAL OF DAILY EVAPOTRANSPIRATION OVER THE HEIHE RIVER BASIN BY INTEGRATING THE PENMAN METHOD**
*Xingmin Li, Ling Lu, Xin Li, Wenfeng Yang, Chunlin Huang, Zhao Wang*

**THP.J.3** **SEMI-DISTRIBUTED DAILY RUNOFF PROCESS MODELING WITH THE AID OF GIS: A CASE STUDY OF YANQI CATCHMENT IN BEIJING, NORTHERN CHINA**
*Mingfeng Lu, Qiang Zhao*

**THP.J.4** **ENVIRONMENTAL RISKS AND DISTRIBUTION CHARACTERISTICS OF PAHS IN YANGTZE RIVER SEDIMENTS**
*Hongyuan Wang, Zhenyao Shen*

**THP.J.5** **WATER CONSTITUENT ESTIMATION IN PREALPINE LAKES WITH MERIS DATA AND A PHYSICALLY BASED PROCESSOR**
*Daniel Odermatt, Thomas Heege, Jens Nieke, Mathias Kneubühler, Klaus Itten*

**THP.J.6** **EXTRACTING WATERBODY FROM BEIJING-1 MICRO-SATELLITE IMAGES BASED ON KNOWLEDGE DISCOVERY**
*Cunjian Yang, Rong He, Siyuan Wang*

**THP.J.7** **IDENTIFICATION OF EFFECTIVE WAVEBANDS OF AERIAL HYPERSPECTRAL IMAGERY FOR WETLAND VEGETATION MAPPING IN FORT. DRUM MARSH, FLORIDA**
*Chung-Hsin Juan, Chih-Hung Tan, John Criag, Jonathan D. Jordan*

**THP.J.8** **A GEOGRAPHIC INFORMATION SCIENCE (GISCI) APPROACH TO EVALUATING AIRBOAT USE IN THE FLORIDA EVERGLADES**
*James Trice, III, Rakesh Malhotra, Albert Barnett, Marguerite Madden*

**THP.J.9** **RETRIEVALS OF CHLOROPHYLL-A CONCENTRATION IN TAIHU LAKE USING MODIS IMAGE DATA**
*Shuo Yang, Shixin Wang, Yi Zhou, Fuli Yan*

**THP.J.10** **ALOS PALSAR INVESTIGATIONS OF TONLE SAP, CAMBODIA**
*Joong-Sun Won, Jung Hun Choi, Chang-Wook Lee*

**THP.J.11** **ESTIMATION OF GROSS PRIMARY PRODUCTIVITY OF AN OMBROTROPHIC BOG IN SOUTHERN SWEDEN**
*Per Schubert, Magnus Lund, Lars Eklundh*

## THP.K: Thursday, July 10, 17:00 - 18:30

**THP.K** **Applications in Wetlands and Inland Waters III**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area K
Co-Chairs: Thomas Schmid and Aaron Gerace

**THP.K.1** **ECOLOGICAL ENVIRONMENT EFFECT ANALYSIS OF WETLAND CHANGE IN BEIJING REGION USING GIS AND RS**
*Zhaoning Gong, Xiaojuan Li, Lin Zhu*

**THP.K.2** **EXTRACTING WETLAND INFORMATION FORM SPOT5 IMAGERY IN NANSIHU AREA OF SHANDONG PROVINCE**
*Qiang Li, Feng Mao, Jianxi Huang, Qiang Hu, Wensheng Zhou, Ze Liu*

**THP.K.3** **ANALYSIS OF FLOOD INUNDATED AREA USING HYDROLOGICAL MODEL AND RADARSAT SAR IMAGERY**
*Kyung Tak Kim, Jung Sool Park, Joo Hun Kim*

**THP.K.4** **THE CORRELATION ANALYSIS OF VEGETATION VARIABLE PROCESS AND CLIMATE VARIABLES IN ALPINE-COLD WETLAND IN ARID AREA**
*Yan Dou, Xi Chen, Anming Bao, Geping Luo, Guli Jappar, Junli Li*

**THP.K.5** **MONITORING DE LA PLATA BASIN USING PASSIVE AND ACTIVE MICROWAVE INSTRUMENTS**
*Fernando Moccia, Mercedes Salvia, Paolo Ferrazzoli, Patricia Kandus, Haydee Karszenbaum, Francisco Grings, Gabriela Parmuchi, Albaro Soldano*

**THP.K.6** **A METHOD OF IDENTIFYING DEGRADATION OF RUOERGAI WETLAND IN SICHUAN**
*Wenbo Xu, Antao Xie, Jianxi Huang*

**THP.K.7** **REMOTE SENSING AS A BASIC TOOLBOX FOR MONITORING WATER QUALITY PARAMETERS AND AS A SYSTEM OF SURVEILLANCE OF CYANOBACTERIAL HARMFUL ALGAE BLOOMS (SCYANOHABS)**
*José Antonio Domínguez, Covadonga Alonso, Ana Alonso*

**THP.K.8** **TWO-DIMENSIONAL FLOW PATTERNS OBSERVED AT THREEMILE SLOUGH USING TWO RIVERSONDES**
*Calvin Teague*

**THP.K.9** **COMPARISON OF SURFACE ROUGHNESS PARAMETERS OF TIDAL FLAT ESTIMATED FROM AIRSAR AND ALOS OBSERVATIONS**
*Junsu Kim, Wooil Moon*

## THP.L: Thursday, July 10, 17:00 - 18:30

**THP.L** **Ocean Color**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area L
Co-Chairs: Paul Bierman and Soe Hlaing

**THP.L.1** **WATER COMPONENTS RETRIEVAL IN THE PEARL RIVER ESTUARY FROM MERIS DATA**
*Hongyan Xi, Yuanzhi Zhang, Jinnian Chen*

**THP.L.2** **UNDERSTANDING PHYTOPLANKTON VARIABILITY THROUGHOUT SPENCER GULF, SOUTH AUSTRALIA, VIA SATELLITE DERIVED CHLOROPHYLL-A**
*Paul Bierman, Megan Lewis, Jason Tanner, Bertram Ostendorf*

**THP.L.3** **APPLICATIONS OF REMOTE SENSING TECHNIQUES FOR MAPPING POSIDONIA OCEANICA MEADOWS**
*Raffaella Matarrese, Maria Acquaro, Alberto Morea, Khalid Tijani, Maria Teresa Chiaradia*

**THP.L.4** **A SPECIALIZED SUPPORT VECTOR MACHINE FOR COASTAL WATER CHLOROPHYLL RETRIEVAL FROM WATER LEAVING REFLECTANCES**
*Raffaella Matarrese, Vito De Pasquale, Maria Teresa Chiaradia, Guido Pasquariello*

**THP.L.5** **EVALUATION OF OCEAN COLOR ALGORITHM AND SPATIAL SCALES OF VARIABILITY USING MODIS AND SEAWIFS DATA IN THE CANADIAN ARCTIC WATERS: THE BEAUFORT SEA**
*Sélima Ben Mustapha, Pierre Larouche*

**THP.L.6** **CLIMATOLOGICAL EFFECTS ON THE BREEDING OF TERNS**
*Graham Quartly, Sebastien Jaquemet, Matthieu Le Corre, David Monticelli, Jaime Ramos*

**THP.L.7** **PRE-LAUNCH PERFORMANCE ASSESSMENT OF THE VIIRS OCEAN COLOR/ CHLOROPHYLL ALGORITHM**
*Justin Ip, Bruce Hauss, Curtis Mobley*

**THP.L.8** **VALIDATION OF MODIS FLH ALGORITHM USING SATELLITE IMAGERY**
*Soe Hlaing, Rushane Dyer, Jason Borrero, Jing Zhou, Alexander Gilerson, Barry Gross, Fred Moshary, Samir Ahmed*

**THP.L.9** **VALIDATION OF CHLOROPHYLL CONCENTRATION ALGORITHMS IN APULIAN COASTAL AREAS**
*Vito De Pasquale, Raffaella Matarrese, Guido Pasquariello, Maria Teresa Chiaradia*

## THP.M: Thursday, July 10, 17:00 - 18:30

**THP.M** **Surface Temperature and Salinity II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area M
Co-Chairs: Niels Skou and Rebecca Myers

**THP.M.1** **SUMMERTIME SEA SURFACE TEMPERATURE FRONTS IN THE TAIWAN STRAIT**
*Kuo-Wei Lan, Ming-An Lee, Yi Chang, Hsueh-Jung Lu, Chen-Hsin Liao*

**THP.M.2** **UPWELLING DETECTION IN AVHRR SEA SURFACE TEMPERATURE (SST) IMAGES USING NEURAL-NETWORK FRAMEWORK**
*Swapnil Chaudhari, Ramprasad Balasubramanian, Avijit Gangopadhyay*

**THP.M.3** **MODELING OF L-BAND FOAM EMISSIVITY AND IMPACT ON SURFACE SALINITY RETRIEVAL**
*Victor Raizer*

**THP.M.4** **CONTRIBUTIONS TO THE IMPROVEMENT OF THE SMOS LEVEL 2 RETRIEVAL ALGORITHM: OPTIMIZATION OF THE COST FUNCTION.**
*Marco Talone, Adriano Camps, Carolina Gabarró, Roberto Sabia, Mercè Vall-llossera, Baptiste Mourre, Jordi Font*

**THP.M.5** **THE SOIL MOISTURE AND OCEAN SALINITY MISSION - AN OVERVIEW**
*Susanne Mecklenburg, Yann Kerr, Jordi Font, Achim Hahne*

**THP.M.6** **VALITATION OF AVHRR/MODIS/AMSR-E SATELLITE SST PRODUCTS IN THE WEST TROPICAL PACIFIC**
*Peng Guo, Yanchen Bo*

**THP.M.7** **SEA SURFACE ROUGHNESS INFLUENCE ON SALINITIES OBSERVED WITH AN AIRBORNE L-BAND MICROWAVE RADIOMETER: MODEL INTER-COMPARISONS, VALIDATION AND IMPLICATIONS FOR SATELLITE SALINITY RETRIEVAL**
*Derek Burrage, Joel Wesson, David Wang, Stephan Howden, Nicolas Reul*

**THP.M.8** **SEA SURFACE TEMPERATURE AND CHLOROPHYLL-A FEATURES ASSOCIATED WITH OCEANIC FRONTS IN THE EAST CHINA SEA**
*Ming-An Lee, Yi Chang, Jui-Wen Chan, Qian-Wei Zhu, Ming-Zhi Hong, Kuo-Tien Lee*

**THP.M.9** **VARIABILITY OF SURFACE HEAT BUDGET IN CHINA COASTAL SEAS**
*Hongna Wang, Jinnian Chen, Yijun He*

**THP.M.10** **RECENT RESULTS ON THE ACCURATE MEASURTEMENTS OF THE DIELECTRIC CONSTANT OF SEAWATER AT 1.413 GHZ**
*Roger Lang, Yalcin Tarkocin, Cuneyt Utku, David Le Vine*

**THP.M.11** **MODELING THE SPECTRAL SHAPE OF ABSORPTION BY WATER CONSTITUENTS IN TAIHU LAKE**
*Qinghua Fu, Shixin Wang, Yi Zhou, Fuli Yan, Yani Liu*

**THP.M.12** **A NEW TSUNAMI DETECTION CONCEPT USING SPACE BASED MICROWAVE RADIOMETRY**
*Rebecca Myers, John Draim, Paul Cefola, Victor Raizer*

## THP.N: Thursday, July 10, 17:00 - 18:30

**THP.N** **Clouds and Precipitation I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area N
Chair: Yanting Wang

**THP.N.1** **A COMPARISON OF SHORT TERM CLOUD FORECASTS GENERATED USING A NUMERICAL WEATHER MODEL INITIALIZED WITH SATELLITE LIQUID WATER PATH ASSIMILATION TO THOSE PRODUCED BY ADVECTING SATELLITE NEPHANALYSIS FIELDS**
*James Drake*

**THP.N.2** **IDENTIFICATION OF ATMOSPHERIC BROWN CLOUDS (ABCS) USING CALIPSO MEASUREMENTS**
*Jianping Huang, Patrick Minnis, Bin Chen*

**THP.N.3** **TENDENCY OF DRYNESS/WETNESS OVER NORTHWEST CHINA IN RECENT 50 YEARS**
*Jinsong Wang, Jianhong Tao*

**THP.N.4** **THE STUDY ON EVAPOTRANSPIRATION'S PARAMETER RETRIEVAL FORM RS DATA AND IT'S VALIDATION-WITH ZHELIN BASIN AS AN EXAMPLE**
*Chongliang Sun, Dong Jiang, Wenchen Jia*

**THP.N.5** **SATELLITE IMAGERY PERSPECTIVES ON TYPHOON INTENSITY AND ITS VARIATION**
*Koung-Ying Liu, Tian-Yow Shyu, Chung-Chih Liu*

**THP.N.6** **MULTIANGULAR POLARIZED CHARACTERISTICS OF CIRRUS CLOUDS AT 1380 NM**
*Tianhai Cheng, Xingfa Gu, Liangfu Chen, Tao Yu*

**THP.N.7** **INFLUENCE OF ICE SURFACE EMISSIVITY VARIATIONS ON THE ACCURACY OF WATER VAPOR RETRIEVAL IN POLAR REGIONS USING AMSU-B CHANNELS**
*Mu Qiao, Jungang Miao*

**THP.N.8** **MODELING ATMOSPHERIC EFFECTS OF INSAR MEASUREMENTS BASED ON MERIS AND GPS OBSERVATIONS**
*Huili Gong, Youquan Zhang, Xiaojuan Li, Angsheng Li, Beibei Chen, Huan Zhou, Yonghua Sun*

**THP.N.9** **TOTAL RAINFALL IN RELATION TO METEOROLOGICAL PARAMETERS OVER TRIVANDRUM**
*Rajasri Sen Jaiswal, S. Uma Vijaysrinivasan*

**THP.N.10** **ANALYSIS OF QUANTITATIVE ESTIMATION OF PRECIPITATION USING DIFFERENT ALGORITHMS WITH DOPPLER RADAR DATA**
*Yuehong Shao, Wanchang Zhang*

## THP.O: Thursday, July 10, 17:00 - 18:30

**THP.O** **Clouds and Precipitation II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area O
Co-Chairs: Christopher Williams and K-S Kuo

**THP.O.1** **INTEGRATED RETRIEVAL OF SURFACE AND ATMOSPHERIC PARAMETERS OVER THE ARCTIC FROM AMSR-E SATELLITE MICROWAVE RADIOMETER DATA USING INVERSE METHODS**
*Christian Melsheimer, Georg Heygster, Leif Toudal Pedersen*

**THP.O.2** **THE APPLICATION OF TROPICAL RAINFALL POTENTIAL TECHNIQUE IN TAIWAN AREAS**
*Chung-Chih Liu, Sung-Ching Chi, Hsin-Chia Yang*

**THP.O.3** **DETERMINATION OF ICE WATER CONTENT IN CONVECTIVE CLOUD USING SATELLITIC MICROWAVE SOUNDING UNIT AND LIGHTING ACTIVITY**
*Fang Xiang, Wang Xin, Qiu Hong, Zhu Yuanjing*

**THP.O.4** **THE APPLICATION OF AMSU DATA FOR THE ENVIROMENTAL WATER VAPOR TRANSPORTATION AROUND THE TROPICAL CYCLONES**
*Wang Xin, Fang Xiang, Qiu Hong, Zhu Yuanjing*

**THP.O.5** **MIE VERSUS POINT MATCHING ALGORITHM FOR RADAR RAIN PROPERTIES RETRIEVAL**
*Dirk Klugmann, Ondrej Fišer*

**THP.O.6** **POLAR MESOSPHERIC CLOUD MODELING AND SEASONAL FORECASTS WITH SATELLITE DATA**
*Ryan Aschbrenner, James Griffin, Hilary Snell*

**THP.O.7** **RAINDROP SIZE DISTRIBUTION VARIABILITY ESTIMATED USING ENSEMBLE STATISTICS**
*Christopher Williams*

**THP.O.8** **NETWORKED WAVEFORM SYSTEM FOR RANGE VELOCITY AMBIGUITY MITIGATION**
*Nitin Bharadwaj, Chandrasekar V. Chandra*

**THP.O.9** **A NOVEL SOLID-STATE, DUAL-POLARIZED, DUAL WAVELENGTH PRECIPITATION DOPPLER RADAR / RADIOMETER**
*James Carswell, Steven Bidwell, Robert Meneghini*

**THP.O.10** **SCALABLE MULTIFUNCTION DENSE RADAR NETWORK**
*Anthony P. Hopf, Eric J. Knapp, David J. McLaughlin*

**THP.O.11** **WEATHER RADAR NETWORK DESIGN PRINCIPLES**
*Francesc Junyent, V. Chandrasekar*

## THP.P: Thursday, July 10, 17:00 - 18:30

**THP.P** **Land Ice and Snow I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area P
Co-Chairs: Giovanni Macelloni and Marco Tedesco

**THP.P.1** **SYNTHETIC RADIOMETRIC DATA ASSIMILATION SCHEME FOR ESTIMATION OF SNOW WATER EQUIVALENT USING THE ENSEMBLE KALMAN FILTER.**
*Ally Mounirou Toure, Kalifa Goïta, Alain Royer*

**THP.P.2** **CAPABILITIES OF FULL-POLARIMETRIC PALSAR/ALOS FOR SNOW EXTENT MAPPING**
*Nicolas Longepe, Masanobu Shimada, Sophie Allain, Eric Pottier*

**THP.P.3** **DETECTION OF PAN-ARCTIC TERRESTRIAL SNOWMELT FROM QUIKSCAT, 2000 – 2005**
*Libo Wang, Chris P. Derksen, Ross Brown*

**THP.P.4** **A COMPARISION OF SNOWPACK PROPERTIES DERIVED FROM SSM/I EMISSIVITY DATA WITH SNOWPACK PROPERTIES DERIVED FROM SSM/I BRIGHTNESS TEMPERATURE DATA**
*Narges Shahroudi, Amir E Azar, Alfred Powell, Reza Khanbilvardi*

**THP.P.5** **A RE-ANLYSIS OF COLD LAND PROCESSES FIELD EXPERIMENT (CLPX) DATA**
*Amir E Azar, Alfred Powell, Dugwon Seo, Reza Khanbilvardi*

**THP.P.6** **THE RADIATION BEHAVIOR ANALYSIS OF THIN SNOW COVER BASED ON FIELD MEASUREMENTS BY A MULTI-FREQUENCY MICROWAVE RADIOMETER**
*Sheng Chang, Lixin Zhang, Jiancheng Shi, Lingmei Jiang*

**THP.P.7** **COMPARISON OF DRY SNOW EMISSION MODEL AND THE PRIMARY STUDY ON SATELLITE DATA SIMULATION**
*Tianjie Zhao, Lingmei Jiang, Lixin Zhang, Jinyang Du*

**THP.P.8** **DETERMINATION OF SNOW EMISSION ON LAKE ICE FROM AIRBORNE PASSIVE MICROWAVE MEASUREMENTS**
*Anna Kontu, Sami Kemppainen, Juha Lemmetyinen, Jouni Pulliainen*

**THP.P.9** **A PERMANENT SCATTERERS METHOD FOR ANALYSIS OF DEFORMATION OVER PERMAFROST REGIONS OF QINGHAI-TIBETAN PLATEAU**
*Chou Xie, Zhen Li, Xinwu Li*

**THP.P.10** **PULSE ELECTROMAGNETIC SOUNDING OF THE PERMAFROST LAYERED MEDIUM**
*Valery Mironov, Konstantin Muzalevsky*

**THP.P.11** **MELTING SNOW IN GREENLAND AND ANTARCTICA FROM SPACE-BORNE MICROWAVE DATA: UPDATED TRENDS, CLIMATE MODELS AND CLIMATE PATTERNS**
*Marco Tedesco, Xavier Fettweis, Andrew Monaghan, David Bromwich*

## THP.Q: Thursday, July 10, 17:00 - 18:30

**THP.Q** **Land Ice and Snow II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Q
Co-Chairs: Edward Kim and Richard Kelly

**THP.Q.1** **THE GLACIER IDENTIFICATION USING SAR INTERFERMETRIC AND POLARIMETRIC INFORMATION IN QINGHAI-TIBETAN PLATEAU**
*Zhen Li, Jianmin Zhou, Bangsen Tian, Chou Xi*

**THP.Q.2** **ESTIMATION THE MOVEMENT OF GLACIER IN QINHAI-TIBETAN PLATEAU USING SATELLITE RADAR INTERFEROMETRY**
*Jianmin Zhou, Zhen Li*

**THP.Q.3** **DIGITAL ELEVATION MODELS USING A GB-SAR INTERFEROMETER FOR MONITORING GLACIERS: THE CASE STUDY OF BELVEDERE GLACIER**
*Massimiliano Pieraccini, Linhsia Noferini, Guido Luzi, Giovanni Macaluso, Daniele Mecatti, Carlo Atzeni*

**THP.Q.4** **ASTER-DERIVED DEMS FOR GLACIER STUDIES: COMPARISON OF FOUR SOFTWARE PACKAGES**
*Adina Racoviteanu, Siri Jodha Khalsa*

**THP.Q.5** **VARIABILITY IN CENTRAL ASIA SEASONAL SNOW COVER DURING THE MODIS PERIOD OF RECORD**
*Siri Jodha Khalsa, Vladimir Aizen*

**THP.Q.6** **REFLECTANCE PROPERTIES OF SNOW AND FOREST CANOPY: IMPACT ON SNOW RETRIEVAL ALGORITHMS**
*Miia Eskelinen, Jouni Pulliainen, Sari Metsämäki, Anna Kontu, Hanne Suokanerva*

**THP.Q.7** **LONG TERM ANALYSES ON SPATIAL AND TEMPORAL EVALUATION OF SNOW COVERS IN NORTHERN CHINA BY USING RS AND METEOROLOGICAL DATA**
*Xue-Mei Bi, Wan-Chang Zhang*

**THP.Q.8** **ENHANCEMENT OF THE MODIS SNOW AND ICE PRODUCT SUITE UTILIZING IMAGE SEGMENTATION**
*James C. Tilton, Dorothy K. Hall, George A. Riggs*

**THP.Q.9** **OBSERVATIONS OF SMALL DEVIATIONS IN GLACIER VELOCITY MEASUREMENTS**
*Richard Norland*

**THP.Q.10** **EVALUATING THE UTILITY OF SEAWINDS/QUIKSCAT SCATTEROMETER OBSERVATIONS FOR MONITORING ICE PHENOLOGY ON GREAT BEAR AND GREAT SLAVE LAKES, CANADA**
*Stephen Howell, Kyung-Kuk Kang, Laura Brown, Claude R. Duguay*

## THP.R: Thursday, July 10, 17:00 - 18:30

**THP.R** **Land Ice and Snow III**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area R
Co-Chairs: Richard Forster and Ross Brown

**THP.R.1** **INSAR COHERENCE MEASUREMENT TECHNIQUES FOR SNOW COVER MAPPING IN HIMALAYAN REGION**
*Gulab Singh, Gopalan Venkataraman, V. Kumar, Y. S. Rao, Sneh Mani*

**THP.R.2** **THE H/A/ALPHA POLARIMETRIC DECOMPOSITION THEOREM AND COMPLEX WISHART DISTRIBUTION FOR SNOW COVER MONITORING**
*Gulab Singh, Gopalan Venkataraman, V. Kumar, Y. S. Rao, Sneh Mani*

**THP.R.3** **LONG-TERM CHANGES OF SNOW DEPTH IN THE NORTHERN HEMISPHERE BASED ON THE SNOW RETRIEVAL ALGORITHM**
*Hiroyuki Tsutsui, Toshio Koike*

**THP.R.4** **SPACEBORNE INSAR TECHNIQUE FOR STUDY OF HIMALAYAN GLACIERS USING ENVISAT ASAR AND ERS DATA**
*Vijay Kumar, Gopalan Venkataraman, Gulab Singh, Yalamanchali Subramanyam Rao, Sneh Mani*

## THP.S: Thursday, July 10, 17:00 - 18:30

**THP.S** **Sea Ice**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area S
Co-Chairs: Thorsten Markus and Kari Luojus

**THP.S.1** **A STUDY ON SEA ICE OBSERVATION IN THE SEA OF OKHOTSK BY POLARIMETRIC SAR**
*Hiroyuki Wakabayashi, Kazuki Nakamura, Fumihiko Nishio*

**THP.S.2** **SEA ICE SAR FEATURE EXTRACTION BY NON-NEGATVE MATRIX AND TENSOR FACTORIZATION**
*Juha Karvonen, Arto Kaarna*

**THP.S.3** **COMPARISON BETWEEN ENVISAT SAR AND 3-D LASER SCANNER STATISTICS FOR THE BALTIC SEA ICE**
*Markku Similä, Marko Mäkynen, Istvan Heiler, Martti Hallikainen*

**THP.S.4** **AN AUTOMATED APPROACH FOR SEA ICE MAPPING AND ICE FRACTION DETERMINATION FOR THE FUTURE GOES-R ADVANCED BASELINE IMAGER (ABI)**
*Marouane Temimi, Hosni Ghedira, Rouzbeh Nazari, Kim Smith, Reza Khanbilvardi, Peter Romanov*

**THP.S.5** **CONJUNCTIVE RADAR AND LASER ALTIMETRY DATA PROCESSING TO MEASURE SNOW THICKNESS**
*Deepthi Puthalapat, Carl Leuschen, Thorsten Markus, Donald Cavalieri, William Krabill, John Sonntag, Mathew Sturm, James Maslanik*

**THP.S.6** **DEVELOPMENT OF GROUNDING LINE DATABASE AT ANTARCTICA BY INSAR TECHNIQUE**
*Tsutomu Yamanokuchi, Koichiro Doi, Kazuo Shibuya*

## THP.T: Thursday, July 10, 17:00 - 18:30

**THP.T** **Microwave Scattering and Propagation I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area T
Co-Chairs: Carry Rappaport and Monique Bernier

**THP.T.1** **INTEGRAL REPRESENTATION OF THE ELECTROMAGNETIC FIELD FOR THE DESCRIPTION OF THE MAIN MECHANISMS APPEARING IN FORESTED AREA FOR MONOSTATIC AND BISTATIC CONFIGURATIONS.**
*Sami Bellez, Cyril Dahon, Hélène Roussel*

**THP.T.2** **DECOMPOSITION OF POLARIMETIRC SCATTERING OF PADDY RICE**
*Junichi Susaki, Yoshifumi Kawatani*

**THP.T.3** **SCATTERING FROM A DIELECTRIC CIRCULAR CYLINDER OF FINITE LENGTH**
*Wenzhe Yan, Hao Wu, Du Yang, JinAu Kong*

**THP.T.4** **FORWARD PROPAGATION OVER OIL SPILLS ON SEA SURFACES FOR A COASTAL COHERENT RADAR**
*Nicolas Pinel, Christophe Bourlier*

**THP.T.5** **FDTD INVESTIGATION FOR THE ELECTROMAGNETIC SCATTERING FROM THE TARGET ABOVE A RANDOMLY ROUGH SEA SURFACE**
*Juan Li, Li-Xin Guo, Hao Zeng*

**THP.T.6** **MODELING OF HEIGHT SPECTRUM AND RADAR CROSS SECTION OF OIL SLICKS ON SEA SURFACES**
*Nicolas Pinel, Christophe Bourlier*

**THP.T.7** **STATISTICAL ANALYSIS AND SIMULATION OF HIGH-RESOLUTION SAR GROUND CLUTTER DATA**
*Yanzhao Wu, Chao Wang, Hong Zhang, Xiaoyang Wen, Bo Zhang*

**THP.T.8** **APPLICATION OF GIS IN THE ESTIMATION OF SOIL MOISTURE USING DATA FROM AMSR**
*Ruofei Zhong, Peipei Wang, Jianxi Huang*

## THP.U: Thursday, July 10, 17:00 - 18:30

**THP.U** **Volume and Surface Scattering**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area U
Co-Chairs: Carey Rappaort and Paul Siqueira

**THP.U.1** **MULTIPLE-INPUT MULTIPLE-OUTPUT RADAR REAL-TIME IMAGING MODELING AND ALGORITHM**
*Lei Wentai, Su Yi*

**THP.U.2** **CALCULATING FAR-FIELD PATTERNS OF ANTENNAS POSITIONED ON GLACIAL ICE**
*Mike Hughes, Kenneth Demarest*

**THP.U.3** **BISTATIC SCATTERING FROM A SEA-LIKE ONE-DIMENSIONAL ROUGH SURFACE WITH THE PERTURBATION THEORY IN HF-VHF BAND**
*Yohann Brelet, Christophe Bourlier*

**THP.U.4** **INTERPRETATION OF PERTURBATIVE SOLUTION FOR THE SCATTERING FROM LAYERED STRUCTURE WITH ROUGH INTERFACES**
*Pasquale Imperatore, Antonio Iodice, Daniele Riccio*

**THP.U.5** **POLARIMETRIC CHARACTERIZATION OF MAGNETIC FLAT DIPOLE EMBEDDED IN MULTILAYER STRUCTURES**
*Sidnei J. S. Sant'Anna, José Carlos Lacava, David Fernandes*

**THP.U.6** **CORRELATION BETWEEN THE NRCS AND THE WIND SPEED OVER SEA IN BOTH MONOSTATIC AND BISTATIC CONFIGURATIONS**
*Ahmad Awada, Ali Khenchaf, Arnaud Coatanhay*

**THP.U.7** **STUDY OF EMISSION FROM FINITE-SIZE OBJECTS USING FDTD**
*Luis Camacho, Mingyu Lu, Saibun Tjuatja*

**THP.U.8** **MICROWAVE SUBSURFACE CROSSWELL IMAGING USING FINITE DIFFERENCE FREQUENCY DOMAIN MODELING**
*Qiuzhao Dong, Carey Rappaport*

**THP.U.9** **LAYERED SUBSURFACE RADAR PROFILING WITH COMBINED ESPRIT AND SVA ALGORITHMS**
*Yunhua Zhang, Xiang Gu, Wenshuai Zhai, Jing-Shan Jiang*

## THP.V: Thursday, July 10, 17:00 - 18:30

**THP.V** **Microwave Scattering and Propagation II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area V
Co-Chairs: Mahta Moghaddam and Jacob van Zyl

**THP.V.1** **POLARIMETRIC SCATTERING FROM TWO-DIMENSIONAL DIELECTRIC ROUGH SURFACES WITH LARGE RMS SLOPE**
*Li-Xin Guo, Yu-Chao Ren*

**THP.V.2** **RESEARCH ON BACKSCATTERING FROM ROUGH SOIL SURFACE OF LAYERED MEDIUM**
*Xin-Cheng Ren, Li-Xin Guo*

**THP.V.3** **THE MEASUREMENT ON THE DIELECTRIC PROPERTIES OF FRESH-WATER ICE WITH RECTANGULAR WAVEGUIDE AT 2.6GHZ-3.9GHZ**
*Yanli Zhao, Yan Chen, Ling Tong, Liang Zhong, Mingquan Jia*

**THP.V.4** **SENSITIVITY ANALYSIS OF MICROWAVE EMISSION FROM NON-GAUSSIAN CORRELATED SURFACE USING AIEM MODEL**
*Hung-Wei Lee, Kun-Shan Chen, Jiancheng Shi*

**THP.V.5** **AN OCEAN WAVE SPECTRUM DERIVED FROM POLARIMETRIC MICROWAVE RADIOMETER DATA**
*Xiaobin Yin, Zhenzhan Wang, Lei Han, Qing Xu*

**THP.V.6** **ANALYSIS OF SAR IMAGES IN THE FRAMEWORK OF SCALE MIXTURE OF GAUSSIAN MODELS**
*Torbjørn Eltoft*

**THP.V.7** **THE HIGH RESOLUTION RADAR IMAGE SIMULATION OF TARGET ON ROUGH SURFACE**
*Xiaoyang Wen, Chao Wang, Yanzhao Wu, Hong Zhang*

**THP.V.8** **THE IMAGING WIND AND RAIN AIRBORNE PROFILER (IWRAP) DATA ARCHIVE**
*Robert Contreras, Stephen Frasier, Tao Chu, Dragana Perkovic, John McManus, Paul Chang, Zorana Jelenak, James Carswell, Daniel Esteban-Fernandez*

**THP.V.9** **BIOPHYSICAL ESTIMATION OF PADDY RICE WITH CANOPY SCATTERING MODEL AND ALOS/PALSAR IMAGERY IN SOUTHEAST CHINA**
*Cuizhen Wang, Jiaping Wu, Yuan Zhang*

**THP.V.10** **ELECTROMAGNETIC WAVES PROPAGATION ABOVE ROUGH SAE SURFACE : APPLICATION TO EVAPORATION DUCT.**
*Othmane Benhmammouch, Ali Khenchaf, Natacha Caouren*

**THP.V.11** **COMMUNITY RADIATIVE TRANSFER MODEL (CRTM) FOR MICROWAVE SCATTERING TRANSFER AND APPLICATIONS**
*Quanhua (Mark) Liu, Fuzhong Weng*

## THP.W: Thursday, July 10, 17:00 - 18:30

**THP.W** **Interferometry II**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area W
Co-Chairs: Howard Zebker and Irena Hajnsek

**THP.W.1** **VERY LARGE BASELINE INTERFEROMETRY BASED ON SAR SATELLITES FOR HIGH RESOLUTION DEM**
*Bin Cai, Jiying Liu, Zhen Dong, Haifeng Huang*

**THP.W.2** **USING SMALL BASELINE SAR INTERFEROMETRY TO INVESTIGATE LAND SUBSIDENCE INDUCED BY UNDERGROUND COAL MINING**
*Daqing Ge, Yan Wang, Qiong Hu, Junhai Gao, Xiaofang Guo*

**THP.W.3** **SURFACE SUBSIDENCE MONITORING WITH COHERENT POINT TARGET SAR INTERFEROMETRY**
*Daqing Ge, Yan Wang, Qiong Hu, Xiaofang Guo*

**THP.W.4** **MONITORING A LARGE AND COMPLEX LAND SUBSIDENCE IN COAL MINING AREAS WITH A SMALL-BASELINE INTERFEROGRAM STACKING TECHNIQUE**
*Liming Jiang, Hui Lin, Qing Zhao, Yao Wang*

**THP.W.5** **A STUDY OF LAND SUBSIDENCE BY RADAR REMOTE SENSING AT DATONG JURASSIC & CARBONIFEROUS PERIOD COALFIELD**
*Ma Chao, Jia Xiuming, Hao Bingyuan, Hu Haifeng, Zhang Guifang, Shan Xinjian*

**THP.W.6** **TRAJECTORY OPTIMIZATION OF SPASE LASAR 3-D SAR VIA LAGRANGE MULTIPLIER METHOD**
*Zhang Xiaoling, Shi Jun, Yang Jianyu*

**THP.W.7** **DIRECTLY ORTHO-RECTIFYING SPACE-BORNE SAR BASED ON FINE REGISTERED SIMULATION IMAGE**
*Hongjian You, Kun Fu, Hui Long, Daliang Gong*

**THP.W.8** **AN ESTIMATION METHOD FOR INSAR INTERFEROMETRIC PHASE BASED ON JOINT CORRELATION STEERING VECTOR**
*Hai Li, Guisheng Liao*

**THP.W.9** **PHASE UNWRAPPING USING 2D-KALMAN FILTER - POTENTIAL AND LIMITATIONS**
*Holger Nies, Otmar Loffeld, Robert Wang*

**THP.W.10** **INSAR PHASE UNWRAPPING BY MEANS OF A PARTICLE FILTER**
*Juan J. Martinez-Espla, Tomas Martinez-Marin, Juan M. Lopez-Sanchez, J. David Ballester-Berman*

**THP.W.11** **EFFECT OF THE UNWRAPPING PROCESS ON THE CORRELATIONS AMONG INSAR DIFFERENCES FOR THE SAME AREA**
*Paola Ballatore, Janusz Wasowski*

## THP.X: Thursday, July 10, 17:00 - 18:30

**THP.X** **Interferometry / Polarimetry**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area X
Co-Chairs: Paul Siqueira and Razi Ahmed

**THP.X.1** **THEMATIC APPLICATIONS OF ERS-ENVISAT CROSS-INTERFEROMETRY**
*Maurizio Santoro, Urs Wegmüller, Tazio Strozzi, Charles Werner, Andreas Wiesmann, Wolfgang Lengert*

**THP.X.2** **A NOVEL METHOD OF INSAR PROCESSING PERFORMANCE EVALUATION BASED ON IDEAL INTERFEROMETRIC FACTORS**
*Qingsong Wang, Haifeng Huang, Zhen Dong*

**THP.X.3** **EVALUATION OF TERRASAR-X OBSERVATIONS FOR WETLAND INSAR APPLICATION**
*Shimon Wdowinski, Sang-Hoon Hong, Sang-Wan Kim*

**THP.X.4** **SEPARATION OF RESIDUAL MOTION ERRORS USING A STACK OF INTERFEROMETRIC AIRBORNE SAR IMAGES**
*Christian Andres, Martin Keller, Pau Prats, Rolf Scheiber, Irena Hajnsek*

**THP.X.5** **APPLICATION OF INDEPENDENT COMPONENT ANALYSIS ON ERS SAR INTERFEROGRAMS FOR THE ELIMINATION OF SPURIOUS ARTIFACTS**
*Paola Ballatore*

**THP.X.6** **EXTRACTION OF AREA AVERAGED URBAN PARAMETERS FROM POLSAR MEASUREMENT**
*Hajime Fukuchi, Yuichiro Aso, Akihito Takeshiro, Yusuke Komatsu, Makoto Satake*

**THP.X.7** **ANALYSIS OF SIMULATED POLARIMETRIC SAR IMAGES FROM A MULTILAYER ELECTROMAGNETIC SCATTERING MODEL**
*Sidnei J. S. Sant'Anna, José Carlos Lacava, David Fernandes*

**THP.X.8** **AUTOMATIC TARGET RECOGNITION BY MEANS OF POLARIMETRIC ISAR IMAGES AND NEURAL NETWORKS**
*Marco Martorella, Elisa Giusti, Amerigo Capria, Fabrizio Berizzi, Bevan Bates*

## THP.Y: Thursday, July 10, 17:00 - 18:30

**THP.Y** **SAR Processing III**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Y
Co-Chairs: Franz Meyer and Jordi Mallorqui

**THP.Y.1** **HEAVY-TAILED RAYLEIGH DISTRIBUTION: A NEW TOOL FOR THE MODELING OF SAR AMPLITUDE IMAGES**
*Zengguo Sun, Chongzhao Han*

**THP.Y.2** **AUTOMATIC RANGE-MIGRATION CORRECTION IN SAR IMAGING**
*Junfeng Wang, Xingzhao Liu*

**THP.Y.3** **IMAGING EXPERIMENTS FROM PHASE-CORRUPTED AIRBORNE L-SAR DATA**
*Qulin Tan*

**THP.Y.4** **SYNTHETIC APERTURE RADAR IMAGE PROCESSING USING THE SUPERVISED TEXTURAL-NEURAL NETWORK CLASSIFICATION ALGORITHM.**
*Oscar Garcia-Pineda, Ian MacDonald*

**THP.Y.5** **A NONLINEAR REFINED EXTENDED CHIRP SCALING ALGORITHM FOR SPACEBORNE SCANSAR**
*Jie Wei, Houjin Chen, Xiaofeng Zhong*

**THP.Y.6** **ALONG-TRACK RESOLUTION ENHANCEMENT FOR WIDE-BANDWIDTH, LOW-FREQUENCY SAR BY ACCOUNTING FOR THE WAVELENGTH CHANGE OVER THE BANDWIDTH**
*Evan C. Zaugg, David G. Long*

**THP.Y.7** **SAR IMAGE COMPRESSION WITH VECTOR QUANTIZATION OF WAVELET TREES AT LOW BIT RATES**
*Aili Wang, Ye Zhang, Yushi Chen, Yanfeng Gu*

**THP.Y.8** **LAND COVER CHARACTERIZATION AND CLASSIFICATION USING POLARIMETRIC ALOS PALSAR**
*Xinwu Li, Ridha Touzi, Huadong Guo*

**THP.Y.9** **INFORMATION EXTRACTION FROM TERRASAR-X DATA USING SECOND GENERATION WAVELETS**
*Matej Kseneman, Dusan Gleich*

**THP.Y.10** **RECONSTRUCTION SPARSE APERTURE IMAGING USING CLEAN METHOD**
*Long Zhuang, Xingzhao Liu, Junfeng Wang*

## THP.Z: Thursday, July 10, 17:00 - 18:30

**THP.Z** **SAR Processing IV**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area Z
Co-Chairs: Franz Meyer and Jordi Mallorqui

**THP.Z.1** **3D IMAGING OF GROUND BASED SAR DATA**
*Diego Reale, Vito Pascazio, Gilda Schirinzi*

**THP.Z.2** **A COMPARISON BETWEEN FAST FACTORIZED BACKPROJECTION AND FREQUENCY-DOMAIN ALGORITHMS IN UWB LOW FREQUENCY SAR**
*Viet Thuy Vu, Thomas K. Sjögren, Mats Pettersson*

**THP.Z.3** **REMOVAL OF AZIMUTH AMBIGUITIES IN SAR IMAGE WITH TIME-FREQUENCY ANALYSIS**
*Ping Yao, Zhensong Wang*

**THP.Z.4** **RADAR SIGNAL LEVEL FUSION IMAGING**
*Fan Ye, Feng He, Zaoyu Sun*

**THP.Z.5** **ADAPTIVE SUBAPERTURE APPROACH FOR SPOTLIGH SAR AZIMUTH PROCESSING**
*Lihua Jin, Xingzhao Liu, Junfeng Wang*

**THP.Z.6** **A NEW LASAR FAST 3-D IMAGING METHOD VIA WAVELET APPROXIMATION**
*Shi Jun, Zhang Xiaoling, Yang Jianyu*

**THP.Z.7** **THROUGH-THE-WALL IMAGING: MEASUREMENT AND MODELING TECHNIQUES**
*Mojtaba Dehmollaian, Kamal Sarabandi*

**THP.Z.8** **AIRBORNE SPOTLIGHT SAR IMAGING WITH SUPER HIGH RESOLUTION BASED ON BACK-PROJECTION AND AUTOFOCUS ALGORITHM**
*Weixian Tan, Daojing Li, Wen Hong*

## THP.AA: Thursday, July 10, 17:00 - 18:30

**THP.AA** **SAR Processing V**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area AA
Co-Chairs: Franz Meyer and Jordi Mallorqui



**THP.AA.1** **PRECISE SIMULATION OF SPACEBORNE SYNTHETIC APERTURE RADAR AND ITS EVALUATION**
*Li Ran, Li Jingwen*

**THP.AA.2** **OIL SPILL IDENTIFICATION BASED ON TEXTURAL INFORMATION OF SAR IMAGES**
*Fengli Zhang, Yun Shao, Wei Tian, Shiang Wang*

**THP.AA.3** **STUDY ON THE GEOMETRIC DISTORTION CORRECTION ALGORITHM FOR CIRCULAR-SCANNING SAR IMAGING**
*Yong Li, Daiyin Zhu, Ling Wang*

**THP.AA.4** **A NEW INTERFERENCE ELIMINATION METHOD FOR MULTI-SATELLITE SAR SYSTEM**
*Bing-Zhang Sun, Jing-Wen Li*

**THP.AA.5** **ADAPTIVE SAR DESPECKLING USING A PROXIMITY MEASURE TO BOUNDARY**
*Sang-Hoon Lee*

**THP.AA.6** **ANALYSIS OF 3D-SAR BASED ON ANGLE COMPRESSION PRINCIPLE**
*Lei Du, Yan-Ping Wang, Wen Hong, Yi-Rong Wu*

**THP.AA.7** **CORNER REFLECTOR EXPERIMENTS WITH ASAR ACQUISITIONS**
*Lixia Gong, Jingfa Zhang, Qiming Zeng, Yi Luo, Shiyong Yan*

**THP.AA.8** **TOWARDS THE VIRTUAL REMOTE SENSING LABORATORY: INTELLIGENT EXPERIMENT DESIGN PARADIGM**
*Yuriy V. Shkvarko, Hector Perez Meana, Alejandro Castillo Atoche*

## THP.BB: Thursday, July 10, 17:00 - 18:30

**THP.BB** **UAV Sensor Systems**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area BB
Co-Chairs: John Antoniades and David Long

**THP.BB.1** **THE UAVSAR FLIGHT PLANNING SYSTEM**
*Bruce Chapman, Joanne Shimada, Scott Hensley, Anhua Chu, Elaine Chapin*

**THP.BB.2** **COURSE PROGRAM AND CONTROL OF VARIATIONAL BASELINE DIGITAL AERIAL PHOTOGRAPHY BASED ON DEM**
*Fuzhou Duan, Huili Gong, Lin Zhu, Deyong Hu*

**THP.BB.3** **A PRELIMINARY STUDY ON USING UAV-MOUNTED DIGITAL CAMERA AND OBEJECT-ORIENTED SEGMENTATION METHODOLOGY TO MONITOR NITROGEN STATUS**
*Jinxia Zhu, Jinsong Deng, Fenfang Lin, Ke Wang, Xiaodong Ding*

**THP.BB.4** **PROCESSING CHALLENGES FOR AN ULTRA-SMALL LIGHTWEIGHT L-BAND UAV SAR SYSTEM**
*Richard Carande, Aaron Rogan, Albert Burgstahler, Mike Casey, Dan Bindbeutel*

## THP.CC: Thursday, July 10, 17:00 - 18:30

**THP.CC** **Optical Instrument Calibration**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area CC
Co-Chairs: Kurt Thome and Ron Lockwood

**THP.CC.1** **INTERCOMPARISON OF IMAGING SENSORS USING AUTOMATED GROUND MEASUREMENTS**
*Kurtis Thome, Jeffrey Czapla-Myers, John Buchanan, Nathan Leisso, Joel McCorkel*

**THP.CC.2** **WHI IN-SITU CALIBRATION AND ATMOSPHERE CORRECTION IN CASE-II WATER AIDED BY SUN PHOTOMETER**
*Hao Zhang, Bing Zhang, Junsheng Li, Qian Shen, Yuanfeng Wu, Di Wu*

**THP.CC.3** **ON-ORBIT NOISE CHARACTERIZATION FOR MODIS REFLECTIVE SOLAR BANDS**
*Xiaoxiong (Jack) Xiong, Xiaobo Xie, Amit Angal*

**THP.CC.4** **NEW METHODOLOGY FOR AN IMPROVED THERMAL CALIBRATION OF LANDSAT 5 THROUGH FUSION OF ENVIRONMENTAL DATA SOURCES**
*Francis P. Padula, John R. Schott, Nina G. Raqueño*

**THP.CC.5** **RADIOMETRIC CALIBRATION OF REFLECTIVE BANDS OF LANDSAT 4 THEMATIC MAPPER USING PSEUDO-INVARIANT SITE TECHNIQUE**
*Rimy Malla, Dennis Helder*

**THP.CC.6** **COMPARISON OF TERRA AND AQUA MODIS VIS BANDS ON-ORBIT RESPONSE**
*Xiaoxiong (Jack) Xiong, Junqiang Sun, Nianzeng Che, Taeyoung (Jason) Choi, Amit Angal*

**THP.CC.7** **A STUDY ON ASTER/MODIS RADIOMETRIC AND ATMOSPHERIC CORRECTION**
*Hirokazu Yamamoto, Satoshi Tsuchida, Hiroki Yoshioka*

**THP.CC.8** **DEVELOPMENT OF 2 UM INGAAS RADIOMETER FOR PREFLIGHT CROSS-CALIBRATION EXPERIMENT**
*Fumihiro Sakuma, Shuji Kawakami, Akihiko Kuze*

**THP.CC.9** **MERIS: DIFFUSER BASED RADIOMETRIC CALIBRATION AND VICARIOUS ADJUSTMENTS FOR OCEAN COLOUR**
*Steven Delwart, Ludovic Bourg, Patrice Henry, Richard Santer, Marc Bouvet*

**THP.CC.10** **LANDSAT 5 THEMATIC MAPPER RECALIBRATION PROCEDURE FOR DATA PROCESSED USING THE NATIONAL LANDSAT ARCHIVE PRODUCTION SYSTEM (NLAPS)**
*Gyanesh Chander, Md. Obaidul Haque, Esad Micijevic, Julia A. Barsi*

**THP.CC.11** **MONITORING ON-ORBIT STABILITY OF THE TERRA MODIS AND LANDSAT 7 ETM+ REFLECTIVE SOLAR BANDS USING THE RAILROAD VALLEY PLAYA, NEVADA (RVPN) TEST SITE**
*Amit Angal, Taeyoung (Jason) Choi, Gyanesh Chander, Xiaoxiong (Jack) Xiong*

## THP.DD: Thursday, July 10, 17:00 - 18:30

**THP.DD** **Optical Technologies**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area DD
Co-Chairs: Ron Resmini and Mary Ann Glennon

**THP.DD.1** **A PORTABLE AIRBORNE MULTI-SENSOR IMAGING SYSTEM**
*Xiuhong Sun*

**THP.DD.2** **DATA DIMENSION REDUCTION AND BAND SELECTION USING CANOPY SPECTRAL INVARIANTS (CSI) CONCEPT**
*Dianzhong Wang, Guoqing Sun, Shengli Wu, Yong Pang, Zhifeng Guo*

**THP.DD.3** **FINNISH GEODETIC INSTITUTE FIELD GONIOSPECTROMETER (FIGIFIGO): A DEVICE FOR POLARIZED MULTIANGULAR REFLECTANCE MEASUREMENTS**
*Juha Suomalainen, Jouni Peltoniemi, Teemu Hakala, Eetu Puttonen*

**THP.DD.4** **EVALUATION OF CANDIDATE LANDSAT DATA GAP SENSORS**
*Gyanesh Chander, Gregory Stensaas*

**THP.DD.5** **PRECISION COMPARISON OF SEVERAL ALGORITHMS FOR APPROXIMATE GEOMETRIC CORRECTION OF CBERS-02B HIGH RESOLUTION IMAGE**
*Hongyou Liang, Liuzhao Wang, Xingfa Gu, Tao Yu*

**THP.DD.6** **DEVELOPMENT OF A MULTI-FILTER ROTATING SHADOWBAND RADIOMETER NETWORK FOR DISTRIBUTED MONITORING OF AEROSOL OPTICAL DEPTH AND FINE MODE FRACTION**
*Miguel Bustamente, Barry Gross, Fred Moshary, Samir Ahmed*

**THP.DD.7** **IMPACT OF SPECTRAL RESOLUTION ON SOLAR INDUCED FLUORESCENCE AND REFLECTANCE INDICES FOR MONITORING VEGETATION**
*Lawrence Corp, Elizabeth Middleton, Yen-Ben Cheng, Petya Campbell, Karl Huemmrich*

**THP.DD.8** **HUMIDITY EFFECTS ON THERMAL ATMOSPHERIC TRANSMISSIONS: STUDY OF POTENTIAL EFFECTS OF SMALL HYGROSCOPIC AEROSOL PARTICLES IN THE LONGWAVE INFRARED REGION**
*Rolando Raqueno, Robert Kremens, Carl Salvaggio, Matt Montanaro, Robert Gelein*

## THP.EE: Thursday, July 10, 17:00 - 18:30

**THP.EE** **Active Microwave Remote Sensing I**
Session Type: Poster
Time: Thursday, July 10, All Day (Authors Present: 17:00 - 18:30)
Place: Poster Area EE
Co-Chairs: Jeroen Verspeek and Antonio Iodice

**THP.EE.1** **SAR IMAGE SIMULATION OF MAN-MADE SCENES BASED ON COMPUTER GRAPHICS**
*Fan Zhang, Wen Hong, Daojing Li*

**THP.EE.2** **FRACTAL BASED MODELING OF ALTIMETER DATA**
*Gabriella Bernardi, Giorgio Franceschetti, Antonio Iodice, Daniele Riccio*

**THP.EE.3** **SIMULATION OF IMPROVED BANDWIDTH CONFORMAL BOW-TIE ANTENNAS FOR REMOTE SENSING PRINTED ON MULTI-SCALE TRIANGULAR-PATCH HIGH-IMPEDANCE GROUND PLANES**
*Murat Dogrul, Peter Collins, Michael Saville, Kubilay Sertel, Andrew Terzuoli*

**THP.EE.4** **FABRICATION OF MULTI-SCALE TRIANGULAR PATCH HIGH IMPEDANCE GROUND PLANES TO IMPROVE THE BANDWIDTH OF CONFORMAL BOW-TIE ANTENNAS FOR REMOTE SENSING**
*Bora Cakiroglu, Peter Collins, Michael Havrilla, Kubilay Sertel, Andrew Terzuoli*

**THP.EE.5** **COMPROMISE AND TRADE-OFF BETWEEN SIGNAL-TO-NOISE RATIO AND NUMBER OF INDEPENDENT SAMPLES FOR RADAR SCATTEROMETERS WITH PULSE COMPRESSION**
*Xiaolong Dong, Heguang Liu, Jing-Shan Jiang*

**THP.EE.6** **WAVE PARAMETERS ESTIMATED FROM SACTTEROMETER DATA**
*Jie Guo, Yijun He, William Perrie*

**THP.EE.7** **IMPLEMENTATION OF PULSE COMPRESSION ON AN AIRBORNE SCATTEROMETER**
*John McManus, Stephen Frasier*

**THP.EE.8** **COMBINED USE OF THE RADAR AND RADIOMETER DATA TO DERIVE SURFACE PARAMETERS RANGES: APPLICATION TO CASSINI DATA ACQUIRED ON TITAN SURFACE**
*Bartolomeo Ventura, Casarano Domenico, Claudia Notarnicola, Janssen Michael A., Francesco Posa*

## FR1.210: Friday, July 11, 08:20 - 10:00

### Panel Session

**FR1.210** **Baseline Climate Identification and Global Change**
Session Type: Panel
Time: Friday, July 11, 08:20 - 10:00
Place: Room 210
Chair: Dara Entekhabi
About: Assessment of global change risks due to anthropogenic greenhouse gas emissions and land conversion requires the identification of a baseline climate state. This panel session will focus on the use of satellite observations to provide the global coverage needed to establish such a baseline, to monitor environmental changes and to assess their impacts.

8:20
**FR1.210.1** **THE CHALLENGE OF MONITORING GLOBAL CLIMATE CHANGE FROM SPACE**
*George Ohring*

8:53
**FR1.210.2** **A REMOTE-SENSING PERSPECTIVE OF CLOUD FEEDBACK IN THE CLIMATE SYSTEM**
*Graeme Stephens*

9:26
**FR1.210.3** **SPATIAL AND TEMPORAL INTER-RELATIONSHIPS BETWEEN ANOMALIES OF TEMPERATURE, MOISTURE, CLOUD COVER, AND OLR AS OBSERVED BY AIRS/AMSU ON AQUA**
*Joel Susskind*

## FR1.101: Friday, July 11, 08:20 - 10:00

**FR1.101** **Mapping Urban Areas I**
Session Type: Oral-Contributed
Time: Friday, July 11, 08:20 - 10:00
Place: Room 101
Chair: Domenico Solimini

8:20
**FR1.101.1** **COMPARISON OF MULTI- AND HYPERSPECTRAL REMOTE SENSING DATA FOR USE IN COMPREHENSIVE URBAN BIOTOPE MAPPING**
*Mathias Bochow, Karl Segl, Hermann Kaufmann*

8:40
**FR1.101.2** **CHARACTERIZING THE URBAN GROWTH OF HANOI, NAGOYA, AND SHANGHAI CITY USING REMOTE SENSING AND SPATIAL METRICS**
*Pham Minh Hai, Yasushi Yamaguchi*

9:00
**FR1.101.3** **CA-BASED SIMULATION OF ASIAN URBAN DYNAMICS: A CASE STUDY OF TAIPEI METROPOLITAN AREA, TAIWAN**
*Bing Sheng Wu, Daniel Z. Sui*

9:20
**FR1.101.4** **STUDY ON THE CHANGE OF SURFACE TEMPERATURES AND URBAN HEAT ISLAND PHENOMENON USING MULTI-TEMPORAL THERMAL IMAGES**
*Akira Hoyano, Akinobu Murakami*

9:40
**FR1.101.5** **STUDY ON REMOTE SENSING RETRIEVAL OF THERMAL ENVIRONMENT AND THE TEMPORAL-SPATIAL DISTRIBUTION IN BEIJING-CAPITAL ZONE**
*Dan Meng, Huili Gong, Xiaojuan Li, Zhaoning Gong, Zhuo-Wei Hu, Lin Zhu*

## FR1.102: Friday, July 11, 08:20 - 10:00

**FR1.102** **Digital Beamforming for Future Remote Sensing Systems I**
Session Type: Oral-Invited
Time: Friday, July 11, 08:20 - 10:00
Place: Room 102
Co-Chairs: Alberto Moreira and Werner Wiesbeck

8:20
**FR1.102.1** **THE APPLICATION OF DIGITAL BEAMFORMING TECHNIQUES TO ENABLE SWATH MAPPING OF LAND ICE AND GLACIAL TOPOGRAPHY**
*Delwyn Moller, Brandon Heavey, Richard Hodges, Sembiam Rengarajan, Eric Rignot, Marc Simard, Greg Sadowy, Mark Zawadzki*

8:40
**FR1.102.2** **DIGITAL BEAMFORMING FOR A 3D MIMO SAR**
*Jens Klare*

9:00
**FR1.102.3** **ULTRA WIDE SWATH IMAGING WITH MULTI-CHANNEL SCANSAR**
*Nicolas Gebert, Gerhard Krieger, Marwan Younis, Federica Bordoni, Alberto Moreira*

9:20
**FR1.102.4** **INVESTIGATION OF A NEW MULTIFUNCTIONAL HIGH PERFORMANCE SAR SYSTEM CONCEPT EXPLOITING MIMO TECHNOLOGY**
*Junghyo Kim, Werner Wiesbeck*

9:40
**FR1.102.5** **THE THINNED ARRAY TIME DIVISION MULTIPLE PHASE CENTER APERTURE SYNTHESIS AND APPLICATION**
*Yingni Hou, Daojing Li, Wen Hong*

## FR1.103: Friday, July 11, 08:20 - 10:00

**FR1.103** **Passive Remote Sensing of the Cryosphere**
Session Type: Oral-Contributed
Time: Friday, July 11, 08:20 - 10:00
Place: Room 103
Co-Chairs: Martti Hallikainen and Mohammed Shokr

8:20
**FR1.103.1** **SPATIAL AND TEMPORAL MONITORING OF THE EAST-ANTARCTIC PLATEAU USING PASSIVE MICROWAVE DATA**
*Giovanni Macelloni, Marco Brogioni, Simonetta Paloscia, Paolo Pampaloni, Simone Pettinato, Emanuele Santi*

8:40
**FR1.103.2** **SPATIAL RESOLUTION ENHANCEMENT OF AMSR TB IMAGES BASED ON MEASUREMENT LOCAL TIME OF DAY**
*Brian Gunn, David G. Long*

9:00
**FR1.103.3** **SIMULATION OF SPACEBORNE MICROWAVE RADIOMETER MEASUREMENTS OF SNOW COVER USING IN-SITU DATA AND EMISSION MODELS**
*Anna Kontu, Jouni Pulliainen*

9:20
**FR1.103.4** **ABSORPTION AT MICROWAVE FREQUENCIES IN A MOIST METAMORPHIC SNOW PACK DUE TO PENDULAR RING ACCUMULATIONS OF LIQUID WATER**
*Roger De Roo, Anthony England, Yi-Ching Chung, Etai Weininger, Kelly Howell*

9:40
**FR1.103.5** **OPERATIONAL SNOWCOVER MAPPING USING MSG/SEVIRI DATA**
*Niilo Siljamo, Otto Hyvärinen, Jarkko Koskinen*

## FR1.104: Friday, July 11, 08:20 - 10:00

**FR1.104** **Land Use/Land Cover Classification IV**
Session Type: Oral-Contributed
Time: Friday, July 11, 08:20 - 10:00
Place: Room 104
Co-Chairs: Leland Pierce and Darrel Williams

8:20
**FR1.104.1** **NEW BEST PRACTICES FOR DATA INTEGRATION ACROSS SPATIAL RESOLUTIONS AND GEOGRAPHIC REFERENCE FRAMEWORKS**
*Zachary Christman*

8:40
**FR1.104.2** **LAND COVER ANALYSIS ON SUB-CONTINENTAL SCALE: FAO LCCS STANDARD WITH 250 METER MODIS SATELLITE OBSERVATIONS IN WEST AFRICA**
*Miriam Machwitz, Tobias Landmann, Anna Cord, Christopher Conrad, Stefan Dech*

9:00
**FR1.104.3** **CHARACTERIZING CHANGES IN THE LAND USE AND LAND COVER IN THE FT. COBB RESERVOIR WATERSHED, OKLAHOMA**
*Mahesh Rao, Siewe Siewe*

9:20
**FR1.104.4** **STATUS UPDATE ON A NEW LANDSAT GLOBAL LAND SURVEY DATA SET**
*Darrel Williams, Rachel Headley, Jeffrey Masek*

9:40
**FR1.104.5** **SOFT CLASSIFICATION AND ASSESSMENT OF KALMAN FILTER NEURAL NETWORK FOR COMPLEX LANDCOVER OF TROPICAL RAINFORESTS**
*Prashanth Reddy Marpu, Arief Wijaya, Richard Gloaguen*

## FR1.105: Friday, July 11, 08:20 - 10:00

**FR1.105** **Pansharpening**
Session Type: Oral-Contributed
Time: Friday, July 11, 08:20 - 10:00
Place: Room 105
Co-Chairs: Luciano Alparone and Nick Younan

8:20
**FR1.105.1** **PANSHARPENING QUALITY ASSESSMENT USING MODULATION TRANSFER FUNCTION FILTERS**
*Muhammad Murtaza Khan, Luciano Alparone, Jocelyn Chanussot*

8:40
**FR1.105.2** **WEIGHTED LEAST SQUARES PAN-SHARPENING OF VERY HIGH RESOLUTION MULTISPECTRAL IMAGES**
*Filippo Nencini, Luca Capobianco, Andrea Garzelli*

9:00
**FR1.105.3** **BAYESIAN FUSION OF MULTISPECTRAL AND HYPERSPECTRAL IMAGE IN WAVELET DOMAIN**
*Yifan Zhang, Steve De Backer, Paul Scheunders*

9:20
**FR1.105.4** **PANSHARPENING BASED ON QNR OPTIMIZATION**
*Muhammad Murtaza Khan, Luciano Alparone, Jocelyn Chanussot*

9:40
**FR1.105.5** **FAST PANCHROMATIC SHARPENING FOR HIGH-RESOLUTION MULTI-SPECTRAL IMAGES**
*Jonghwa Lee, Chulhee Lee*

## FR1.107: Friday, July 11, 08:20 - 10:00

**FR1.107** **Geospatial Standards & Services I**
Session Type: Oral-Contributed
Time: Friday, July 11, 08:20 - 10:00
Place: Room 107
Chair: Yu Fang

8:20
**FR1.107.1** **A LOAD BALANCING ALGORITHM FOR SPATIAL DATA IN GRIDGIS**
*Xiaohui Zhao, Yu Fang, Bin Chen*

8:40
**FR1.107.2** **INTEGRATING MAP SERVICES AND LOCATION-BASED SERVICES FOR GEO-REFERENCED INDIVIDUAL DATA COLLECTION**
*Xiujun Ma, Zhongya Wei, Yanwei Chai, Kunqing Xie*

9:00
**FR1.107.3** **DESIGN AND IMPLEMENTATION OF WSRF- BASED GIS SERVICE IN SPATIAL DATA GRID**
*Xi Wu, Zhou Huang, Yu Fang, Bin Chen*

9:20
**FR1.107.4** **A STANDARDS-COMPLIANT WEB-BASED DYNAMIC GEOSPATIAL DATA DRIVEN SYSTEM**
*Genong Yu, Peichuan Li, Huilin Wang, Liping Di, John Moses*

9:40
**FR1.107.5** **INTEROPERABILITY MIDDLEWARE BETWEEN GEOSCIENCE AND GEOSPATIAL CATALOG PROTOCOLS**
*Chengfang Hu, Liping Di, Wenli Yang, Yaxin Wei, Yuqi Bai, Christopher Lynnes, Yonsook Enloe, Ben Domenico, Glenn Rutledge*

## FR1.108: Friday, July 11, 08:20 - 10:00

**FR1.108** **Active Microwave Remote Sensing - Weather**
Session Type: Oral-Contributed
Time: Friday, July 11, 08:20 - 10:00
Place: Room 108
Co-Chairs: V. Chandrasekar and Steve Frasier

8:20
**FR1.108.1** **SYSTEM DESIGN OF CLOUD PROFILING RADAR FOR EARTHCARE**
*Hirotaka Nakatsuka, Kazuyuki Okada, Hiroaki Horie, Toshiyoshi Kimura, Yukie Iida, Masahiro Kojima, Kenji Sato, Yuich Ohno, Nobuhiro Takahashi, Hiroshi Kumagai*

8:40
**FR1.108.2** **A KA-BAND INTERFEROMETER FOR CRYOSPHERIC APPLICATIONS- INSTRUMENT DESCRIPTION AND FIRSTS RESULTS**
*Harish Vedantham, Paul Siqueira, Karthik Srinivasan, Edin Insanic*

9:00
**FR1.108.3** **THE UMASS X-POL MOBILE DOPPLER RADAR: DESCRIPTION, RECENT OBSERVATIONS AND NEW SYSTEM DEVELOPMENTS**
*Vijay Venkatesh, Sandeep Palreddy, Anthony P. Hopf, Kerry Hardwick, Pei-Tsang Tsai, Stephen Frasier, Howard Bluestein, Jana Hauser, Michael French, Jeffrey Snyder, Robin Tanamachi*

9:20
**FR1.108.4** **CALIBRATION OF THE UMASS ADVANCED MULTI-FREQUENCY RADAR (AMFR)**
*Matthew McLinden, Ninoslav Majurec, Paul Siqueira*

9:40
**FR1.108.5** **PULSE COMPRESSION WITH WEATHER RADARS**
*Jim George, Nitin Bharadwaj, Chandrasekar V. Chandra*

## FR1.109: Friday, July 11, 08:20 - 10:00

**FR1.109** **Rough Surface Scattering and Remote Sensing I**
Session Type: Oral-Invited
Time: Friday, July 11, 08:20 - 10:00
Place: Room 109
Co-Chairs: Marc Saillard and Joel Johnson

8:20
**FR1.109.1** **AN EMPIRICAL STUDY OF BREAKING WAVE CONTRIBUTION TO RADAR BACKSCATTER FROM THE OCEAN SURFACE AT LOW GRAZING ANGLE**
*Paul Hwang, Mark Sletten, Jakov Toporkov*

8:40
**FR1.109.2** **SCATTERING FROM NONGAUSSIAN GRAVITY WAVES: THE CHOPPY WAVE MODEL**
*Charles-Antoine Guérin, Frédéric Nouguier, Bertrand Chapron*

9:00
**FR1.109.3** **SCATTERING FROM ROUGH SURFACES AT LOW GRAZING ANGLES: STUDY OF THE ACCURACY OF APPROXIMATE METHODS**
*Philippe Spiga, Gabriel Soriano, Marc Saillard*

9:20
**FR1.109.4** **NUMERICAL SIMULATIONS OF EMISSION AND BISTATIC SCATTERING FROM SOILS WITH ROUGH SURFACES OF EXPONENTIAL CORRELATION FUNCTIONS**
*Peng Xu, Leung Tsang, Kun-Shan Chen*

9:40
**FR1.109.5** **MONTE CARLO SIMULATIONS OF ALTIMETER PULSE RETURNS AND THE ELECTROMAGNETIC BIAS**
*Praphun Naenna, Joel Johnson*

## FR1.110: Friday, July 11, 08:20 - 10:00

**FR1.110** **Forest Parameter Estimation from Space using SAR I**
Session Type: Oral-Invited
Time: Friday, July 11, 08:20 - 10:00
Place: Room 110
Co-Chairs: Kostas Papathanassiou and Robert Treuhaft

8:20
**FR1.110.1** **FOREST PARAMETER RETRIEVAL FROM SAR INTENSITY DATA**
*Richard Lucas, Joao Carreiras, Peter Bunting, John Armston, Daniel Clewley*

8:40
**FR1.110.2** **TROPICAL-FOREST DENSITY PROFILES FROM MULTIBASELINE INSAR: CONSTRAINING DENSITY ESTIMATES AT C-BAND**
*Robert Treuhaft, Bruce Chapman, Fábio Gonçalves, João Roberto Santos, Luciano Vieira Dutra, Paulo Alencastro Graça, Jason Drake*

9:00
**FR1.110.3** **AUTOMATIC MODEL INVERSION OF MULTI-TEMPORAL C-BAND COHERENCE AND BACKSCATTER MEASUREMENTS FOR FOREST STEM VOLUME RETRIEVAL**
*Maurizio Santoro, Jan Askne, Christian Beer, Oliver Cartus, Christiane Schmullius, Urs Wegmüller, Andreas Wiesmann*

9:20
**FR1.110.4** **POL-INSAR APPROACHES AT L-BAND: ACTUAL STATUS AND THE IMPACT OF TEMPORAL DECORRELATION**
*Florian Kugler, Seung-Kuk Lee, Konstantinos Papathanassiou, Irena Hajnsek*

9:40
**FR1.110.5** **BANDWIDTH EFFECTS IN POL-INSAR FOREST PARAMETER ESTIMATION PERFRORMANCE AT P-BAND**
*Seung-Kuk Lee, Florian Kugler, Konstantinos Papathanassiou, Irena Hajnsek*

## FR1.111: Friday, July 11, 08:20 - 10:00

**FR1.111** **Earth Observation Sensor Web I**
Session Type: Oral-Invited
Time: Friday, July 11, 08:20 - 10:00
Place: Room 111
Co-Chairs: Liping Di and Karen Moe

8:20
**FR1.111.1** **NASA TECHNOLOGY FOR THE EARTH OBSERVATION SENSOR WEB**
*Karen Moe*

8:40
**FR1.111.2** **GEOSPATIAL WORKFLOW IN A SENSOR WEB ENVIRONMENT: TRANSACTIONS, EVENTS, AND ASYNCHRONY**
*Genong Yu, Liping Di, John Moses, Peichuan Li, Peisheng Zhao*

9:00
**FR1.111.3** **USER REQUIREMENTS FOR SENSOR WEB BASED SCIENTIFIC WORKFLOWS IN THE CHOLERA RESEARCH DOMAIN**
*Graeme McFerren, Terence Lesley van Zyl, Marna van der Merwe, Martella du Preez*

9:20
**FR1.111.4** **A SOIL MOISTURE SMART SENSOR WEB USING DATA ASSIMILATION AND OPTIMAL CONTROL: FORMULATION AND FIRST LABORATORY DEMONSTRATION**
*Mahta Moghaddam, Dara Entekhabi, Yuriy Goykhkman, Mingyan Liu, Aditya Mahajan, Ashutosh Nayyar, David Shuman, Demos Teneketzis*

9:40
**FR1.111.5** **A LAND INFORMATION SENSOR WEB (LISW) STUDY IN SUPPORT OF LAND SURFACE STUDIES**
*Hongbo Su, Paul Houser, Yudong Tian, James Geiger, Sujay Kumar, Deborah Belvedere*

## FR1.203: Friday, July 11, 08:20 - 10:00

**FR1.203** **Collaborative Adaptive Sensing of the Atmosphere I**
Session Type: Oral-Invited
Time: Friday, July 11, 08:20 - 10:00
Place: Room 203
Co-Chairs: Charles A. Luther and Steven Reising

8:20
**FR1.203.1** **CASA OVERVIEW**
*David J. McLaughlin*

8:40
**FR1.203.2** **EVALUATION OF DISTRIBUTED COLLABORATIVE ADAPTIVE SENSING IN A FOUR-NODE RADAR NETWORK: INTEGRATED PROJECT 1**
*V. Chandrasekar, David J. McLaughlin, Jerry Brotzge, Michael Zink, Brenda Philips, Yanting Wang*

9:00
**FR1.203.3** **METEOROLOGICAL COMMAND & CONTROL: ARCHITECTURE AND PERFORMANCE EVALUATION**
*Michael Zink, Eric Lyons, David Westbrook, Dave Pepyne, Brenda Philips, Jim Kurose, V. Chandrasekar*

9:20
**FR1.203.4** **CASA TEST BED FOR URBAN FLOOD ALERT: SYSTEM DESIGN FOR INTEGRATED PROJECT 2**
*Yanting Wang, Sanghun Lim, V. Chandrasekar, Baxter Vieux, Phil Bedient, Michael Zink*

9:40
**FR1.203.5** **USER EVALUATIONS OF ADAPTIVE SCANNING PATTERNS IN THE CASA SPRING EXPERIMENT 2007**
*Brenda Philips, David Westbrook, David Pepyne, Ellen Bass, Don Rude, Jerry Brotzge*

## FR2.101: Friday, July 11, 10:20 - 12:00

**FR2.101** **Mapping Urban Areas II**
Session Type: Oral-Contributed
Time: Friday, July 11, 10:20 - 12:00
Place: Room 101
Co-Chairs: Domenico Solimini and Chiara Solimini

10:20
**FR2.101.1** **DETECTION OF URBAN ZONES IN SATELLITE IMAGES USING VISUAL WORDS**
*Lior Weizman, Jacob Goldberger*

10:40
**FR2.101.2** **IMPROVING THE NORMALIZED DIFFERENCE BUILD-UP INDEX TO MAP URBAN BUILD-UP AREAS BY USING A SEMIAUTOMATIC SEGEMENTATION APPROACH**
*Chunyang He, Dingyong Xie*

11:00
**FR2.101.3** **ANALYSIS OF THE DEGREE OF URBAN IMPERVIOUS SURFACE BASED ON OBJECT-ORIENTED METHOD**
*Qulin Tan, Zhengjun Liu, Xiaofang Li*

11:20
**FR2.101.4** **SEMI-AUTOMATED EXTRACTION OF HUMAN SETTLEMENT EXTENT IN HR SAR IMAGES**
*Mattia Stasolla, Paolo Gamba*

11:40
**FR2.101.5** **WAVENUMBER SPECTRA FOR VHR URBAN CHARACTERIZATION**
*Chiara Solimini, William J. Emery, Domenico Solimini*

## FR2.102: Friday, July 11, 10:20 - 12:00

**FR2.102** **Digital Beamforming for Future Remote Sensing Systems II**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 102
Co-Chairs: Alberto Moreira and Werner Wiesbeck

10:20
**FR2.102.1** **FRONTEND TECHNOLOGY FOR DIGITAL BEAMFORMING SAR**
*Christoph Heer, Christian Fischer, Christoph Schaefer*

10:40
**FR2.102.2** **SIMULTANEOUS SPOTLIGHT AND STRIPMAP IMAGING MODE FOR A SINGLE CHANNEL SAR USING AZIMUTH PHASE CODING**
*Pierfrancesco Lombardo, Matteo Sedehi, Diego Cristallini*

11:00
**FR2.102.3** **EXPERIMENTAL PERFORMANCE INVESTIGATION OF DIGITAL BEAMFORMING ON SYNTHETIC APERTURE RADAR**
*Junghyo Kim, Marwan Younis, Werner Wiesbeck*

11:20
**FR2.102.4** **HRWS IMAGING FOR SPACE-BORNE BISTATIC SAR WITH MULTIPLE PHASE CENTERS**
*Tao Lai, Zhen Dong, Diannong Liang, Feng He*

11:40
**FR2.102.5** **NASA'S DIGITAL BEAMFORMING SYNTHETIC APERTURE RADAR (DBSAR)**
*Rafael Rincon*

## FR2.103: Friday, July 11, 10:20 - 12:00

**FR2.103** **Sea Ice as an Indicator for Climate Change I**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 103
Co-Chairs: Mohammed Shokr and Stephen Howell

10:20
**FR2.103.1** **AIRBORNE FMCW RADAR FOR SNOW DEPTH ESTIMATION OVER ANTARCTIC SEA ICE**
*Natalia Galin, Anthony Worby, Robert Massom, Carl Leuschen, Graham Brooker, Sivaprasad Gogineni, Jan Lieser, Peter Jansen*

10:40
**FR2.103.2** **ANALYSIS OF C-BAND POLARIMETRIC SIGNATURES OF ARCTIC LEAD ICE USING DATA FROM AIRSAR AND RADARSAT-1**
*Daniel Bäck, Ben Holt, Ron Kwok*

11:00
**FR2.103.3** **EVALUATING ALOS-PALSAR FOR ICE MONITORING - WHAT CAN L-BAND DO FOR THE NORTH AMERICAN ICE SERVICE?**
*Matt Arkett, Dean Flett, Roger De Abreu, Pablo Clemente-Colon, John Woods, Brian Melchior*

11:20
**FR2.103.4** **MONITORING CHANGES IN THE TIME OF MELT ONSET AND FREEZE ONSET OVER THE CANADIAN ARCTIC ARCHIPELAGO USING SEAWINDS/QUIKSCAT**
*Stephen Howell, Adrienne Tivy, John Yackel, Brent Else, Claude R. Duguay*

11:40
**FR2.103.5** **ANALYSIS OF ANTARCTIC ICEBERG AND SEA ICE MELTING PATTERNS USING QUIKSCAT**
*Keith M. Stuart, David G. Long*

## FR2.104: Friday, July 11, 10:20 - 12:00

**FR2.104** **Land Use/Land Cover Classification V**
Session Type: Oral-Contributed
Time: Friday, July 11, 10:20 - 12:00
Place: Room 104
Co-Chairs: Mahta Moghaddam and Brian Markham

10:20
**FR2.104.1** **THE USE OF MODIS NDVI DATA FOR CHARACTERIZING CROPLAND ACROSS THE GREAT LAKES BASIN**
*Yang Shao, Ross Lunetta*

10:40
**FR2.104.2** **CROP ROTATION CHANGES IN IOWA DUE TO ETHANOL PRODUCTION**
*Alan Stern, Paul C. Doraiswamy, Bakhyt Akhmedov*

11:00
**FR2.104.3** **THE EFFECTS OF LAND USE CHANGE ON THE TERRESTRIAL CARBON BUDGETS OF NEW ENGLAND**
*Sung Bae Jeon, Curtis E. Woodcock*

11:20
**FR2.104.4** **INTEGRATING MONITORING OF FOREST HARVEST WITH A CARBON MODEL TO ESTIMATE THE EFFECTS OF LAND USE CHANGE ON TERRESTRIAL CARBON BUDGETS IN THE BLACK SEA REGION**
*Alessandro Baccini, Curtis E. Woodcock, Richard A. Houghton, Mutlu Ozdogan, Pontus Olofsson, Vlad Gancz, Viorel Blujdea*

11:40
**FR2.104.5** **APPLICATION OF MULTI-SENSOR OPTICAL DATA FOR MONITORING LAND USES WITHIN THE MERCURY MINING AREA OF ALMADÉN, SPAIN**
*Celia Rico, Thomas Schmid, Rocío Millán, María José Sierra, Sandra Carrasco*

## FR2.105: Friday, July 11, 10:20 - 12:00

**FR2.105** **Image Processing: Registration**
Session Type: Oral-Contributed
Time: Friday, July 11, 10:20 - 12:00
Place: Room 105
Co-Chairs: Chi-Hua Chen and Francesca Bovolo

10:20
**FR2.105.1** **AN AREA BASED TECHNIQUE FOR IMAGE-TO-IMAGE REGISTRATION OF MULTI-MODAL REMOTE SENSING DATA**
*Peter Bunting, Frederic Labrosse, Richard Lucas*

10:40
**FR2.105.2** **AUTONOMOUS REGISTRATION OF LIDAR DATA TO SINGLE AERIAL IMAGE**
*Nicholas Shorter, Georgios Anagnostopoulos, Takis Kasparis*

11:00
**FR2.105.3** **IMAGE REGISTRATION USING NON-LINEAR DIFFUSION**
*Michele Ceccarelli, Maurizio di Bisceglie, Carmela Galdi, Generoso Giangregorio, Ullo Silvia Liberata*

11:20
**FR2.105.4** **A SEMI-AUTOMATIC IMAGE REGISTRATION SCHEME BASED ON A NOVEL ASYMMETRICAL CORNER DETECTOR (ACD)**
*Lisha Xie, Jian Guo Liu*

11:40
**FR2.105.5** **A ROBUST REGISTRATION METHOD OF INSAR COMPLEX IMAGES WITH LARGE DISTORTION**
*Zilong Liu, Zhen Dong, Bin Cai, Zaoyu Sun*

## FR2.107: Friday, July 11, 10:20 - 12:00

**FR2.107** **Geospatial Standards & Services II**
Session Type: Oral-Contributed
Time: Friday, July 11, 10:20 - 12:00
Place: Room 107
Co-Chairs: JianWen Ma and Yan Li

10:20
**FR2.107.1** **AN ACCESS CONTROL MECHANISM FOR GEOSPATIAL INFORMATION SERVICES**
*Jiayuan Lin, Yu Fang, Bin Chen, Yu-Mei Sun*

10:40
**FR2.107.2** **AN EFFICIENT ALGORITHM FOR RASTER-TO-VECTOR DATA CONVERSION**
*JunHua Teng, Fahui Wang, Yu Liu, Meixian Sun, Miao Yu*

11:00
**FR2.107.3** **ON EXTRACTING EVOLUTIONS FROM SATELLITE IMAGE TIME SERIES**
*Andreea Juela, Nicolas Meger, Emmanuel Trouvé, Philippe Bolon*

11:20
**FR2.107.4** **SCALABLE AND ERROR TOLERANT AUTOMATED GEOREFERENCING UNDER AFFINE TRANSFORMATIONS**
*Yan Li, Ronald Briggs*

11:40
**FR2.107.5** **ACCESS CONTROL FOR DISTRIBUTED GEOSPATIAL DATABASE USING VIEWS**
*Jiayuan Lin, Yu Fang, Xiujun Ma, Bin Chen*

## FR2.108: Friday, July 11, 10:20 - 12:00

**FR2.108** **Active Microwave Remote Sensing II**
Session Type: Oral-Contributed
Time: Friday, July 11, 10:20 - 12:00
Place: Room 108
Co-Chairs: V. Chandrasekar and Xiaolong Dong

10:20
**FR2.108.1** **SWIM, A MULTI-INCIDENCE BEAMS KU-BAND REAL APERTURE RADAR FOR THE OBSERVATION OF THE OCEAN WAVE FIELD SPECTRA**
*Vivien Enjolras, Eric Caubet, Jacques Richard, Jérôme Lorenzo, Guy Carayon, Patrick Castillan*

10:40
**FR2.108.2** **RETRIEVAL OF REFLECTED DIRECT BROADCAST SATELLITE (DBS) SIGNALS FOR EARTH SCIENCE APPLICATIONS**
*Omar Torres, Roland Lawrence*

11:00
**FR2.108.3** **MOBILE X- TO KU-BAND SCATTEROMETER IN SUPPORT OF THE CORE-H20 MISSION**
*Andreas Wiesmann, Charles Werner, Tazio Strozzi, Urs Wegmüller*

11:20
**FR2.108.4** **ASCAT SCATTEROMETER OCEAN CALIBRATION**
*Jeroen Verspeek, Ad Stoffelen, Marcos Portabella, Anton Verhoef, Jur Vogelzang*

11:40
**FR2.108.5** **PULSE COMPRESSION WITH VERY LOW SIDELOBES IN A SPACEBORNE WEATHER RADAR**
*Di Zhu, Xiaolong Dong, Wenming Lin*

## FR2.109: Friday, July 11, 10:20 - 12:00

**FR2.109** **Rough Surface Scattering and Remote Sensing II**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 109
Co-Chairs: Joel Johnson and Marc Saillard

10:20
**FR2.109.1** **SAR IMAGING SIMULATION FOR AN INHOMOGENEOUS UNDULATED LUNAR SURFACE BASED ON TRIANGULATED IRREGULAR NETWORK**
*Ya-Qiu Jin, Wenzhe Fa, Feng Xu*

10:40
**FR2.109.2** **SCATTERING FROM A SCATTERER NEAR A LARGE RANDOM ROUGH SURFACE WITH THE EXTENDED PILE METHOD**
*Christophe Bourlier, Gildas Kubické*

11:00
**FR2.109.3** **AMPLITUDE AND PHASE STATISTICS FOR BISTATIC SCATTERING FROM ROUGH SURFACES**
*Kung-Hau Ding*

11:20
**FR2.109.4** **ANALYZING EM SCATTERING FROM RANDOMLY ROUGH SURFACES BY COMBINING THE STOCHASTIC SECOND-DEGREE ITERATIVE METHOD, THE SPARSE MATRIX / CANONICAL GRID ALGORITHM AND CHEBYSHEV APPROXIMATION**
*Yang Du, JinAu Kong*

11:40
**FR2.109.5** **SMALL PERTURBATION METHOD FOR SCATTERING FROM ROUGH MULTILAYERES**
*Pasquale Imperatore, Antonio Iodice, Daniele Riccio*

## FR2.110: Friday, July 11, 10:20 - 12:00

**FR2.110** **Forest Parameter Estimation from Space using SAR II**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 110
Co-Chairs: Kostas Papathanassiou and Robert Treuhaft

10:20
**FR2.110.1** **FOREST VERTICAL STRUCTURE ESTIMATION USING COHERENCE TOMOGRAPHY**
*Shane Cloude, Konstantinos Papathanassiou*

10:40
**FR2.110.2** **COMPACT POLARIMETRY MODE FOR A LOW FREQUENCY SAR IN SPACE**
*Pascale Dubois-Fernandez, Sebastien Angelliaume, My-Linh Truong-Loi, Jean-Claude Souyris*

11:00
**FR2.110.3** **TEMPORAL DECORRELATION FOR FORESTED AREAS OBSERVED IN SPACEBORNE L-BAND SAR INTERFEROMETRY**
*Leif E. B. Eriksson, Klas Folkesson, Gustaf Sandberg, Johan E. S. Fransson, Mattias Magnusson, Andreas Wiesmann*

11:20
**FR2.110.4** **EARLY RESULTS USING SINGLE-PASS L-BAND POL-INSAR**
*Marcus Schwaebisch, Bryan Mercer, Qiaoping Zhang, Sowmya Gopal, Ming Wei*

11:40
**FR2.110.5** **SAR INTERFEROMETRY FOR ESTIMATING ABOVE-GROUND BIOMASS OF SAVANNA WOODLANDS IN BELIZE**
*Karin Viergever, Iain Woodhouse, Neil Stuart*

## FR2.111: Friday, July 11, 10:20 - 12:00

**FR2.111** **Earth Observation Sensor Web II**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 111
Co-Chairs: Liping Di and Karen Moe

10:20
**FR2.111.1** **A FOREST FIRE SENSOR WEB CONCEPT WITH UAVSAR**
*Yunling Lou, Steve Chien, Duane Clark, Joshua Doubleday, Ron Muellerschoen, Sassan Saatchi, Daniel Tran, Yang Zheng*

10:40
**FR2.111.2** **A SPACE-BASED SENSOR WEB FOR DISASTER MANAGEMENT**
*Daniel Mandl, Rob Sohlberg, Chris Justice, Stephen Ungar, Troy Ames, Stuart Frye, Steve Chien, Daniel Tran, Pat Cappelaere, Don Sullivan, Vince Ambrosia*

11:00
**FR2.111.3** **A SENSOR WEB SIMULATOR FOR DESIGN OF NEW EARTH SCIENCE OBSERVING SYSTEMS**
*Michael Seablom, Joseph Ardizzone, Joseph Terry, Stephen Talabac*

11:20
**FR2.111.4** **USING SENSOR WEB PROCESSES AND PROTOCOLS TO ASSIMILATE SATELLITE DATA INTO A FORECAST MODEL**
*H. Michael Goodman, Helen Conover, Bradley Zavodsky, Manil Maskey, Gary Jedlovec, Kathryn Regner, Xiang Li, Jessica Yue Lu, Mike Botts, Gregoire Berthiau*

11:40
**FR2.111.5** **A SERVICE-ORIENTED GENERAL FRAMEWORK FOR FACILITATING THE INTERACTION AND DYNAMIC COUPLING BETWEEN SENSOR WEB AND EARTH SYSTEM MODELS**
*Liping Di, Genong Yu, Nengcheng Chen*

## FR2.203: Friday, July 11, 10:20 - 12:00

**FR2.203** **Collaborative Adaptive Sensing of the Atmosphere II**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 203
Co-Chairs: Charles A. Luther and Steven Reising

10:20
**FR2.203.1** **REAL-TIME REFRACTIVITY RETRIEVAL USING THE MAGNETRON-BASED CASA X-BAND RADAR NETWORK DURING THE SPRING 2008 CAMPAIGN**
*Boon Leng Cheong, Robert Palmer, V. Chandrasekar, Francesc Junyent*

10:40
**FR2.203.2** **REAL-TIME IMPLEMENTATION OF THE NETWORK-BASED REFLECTIVITY RETRIEVAL FOR CASA**
*S. Lim, V. Chandrasekar, P. Lee, A. P. Jayasumana*

11:00
**FR2.203.3** **WESTERN MASSACHUSETTS OFF-THE-GRID RADAR TECHNOLOGY TESTBED**
*Brian C. Donovan, David J. McLaughlin, Michael Zink, Jim Kurose*

11:20
**FR2.203.4** **PHASE-TILT ARRAY ANTENNA DESIGN FOR DENSE DISTRIBUTED RADAR NETWORK FOR WEATHER SENSING**
*Jorge L. Salazar, Rafael Medina, Eric J. Knapp, David J. McLaughlin*

11:40
**FR2.203.5** **DEVELOPMENT OF SCAN STRATEGY FOR DUAL DOPPLER RETRIEVAL IN A NETWORKED RADAR SYSTEM**
*Yanting Wang, V. Chandrasekar, Brenda Dolan*

## FR2.210: Friday, July 11, 10:20 - 12:00

**FR2.210** **AMSR-E I**
Session Type: Oral-Invited
Time: Friday, July 11, 10:20 - 12:00
Place: Room 210
Co-Chairs: Akira Shibata and Josefino Comiso

10:20
**FR2.210.1** **IMPACTS OF IMPROVED QUALITY CONTROL AND OCEAN EMISSIVITY MODEL FOR AMSR-E RADIANCE ASSIMILATION IN JMA**
*Masahiro Kazumori*

10:40
**FR2.210.2** **IMPROVEMENTS IN THE LEVEL-3 OCEANIC RAINFALL ALGORITHM.**
*Thomas Wilheit*

11:00
**FR2.210.3** **SEVERE WEATHER STUDY IN MIDDLE AND HIGH OCEANIC LATITUDES USING AQUA AMSR-E**
*Leonid Mitnik, Maia Mitnik, Irina Gurvich*

11:20
**FR2.210.4** **GLOBAL MICROWAVE EMISSION DEPTH ANALYSES FROM AMSR-E, SSMI, AND MODIS**
*John Galantowicz, Jean-Luc Moncet, Pan Liang, Alan Lipton*

11:40
**FR2.210.5** **LAND-ATMOSPHERE COUPLED DATA ASSIMILATION BY AMSR-E**
*Toshio Koike, David Kuria, Abdul Rasmy*

## FR3.101: Friday, July 11, 13:20 - 15:00

**FR3.101** **Urban Remote Sensing VII**
Session Type: Oral-Invited
Time: Friday, July 11, 13:20 - 15:00
Place: Room 101
Co-Chairs: Paolo Gamba and Annemarie Schneider

13:20
**FR3.101.1** **ANISOTROPIC ROTATION INVARIANT BUILT-UP PRESENCE INDEX: APPLICATIONS TO SAR DATA**
*Paolo Gamba, Martino Pesaresi, Katrin Molch, Andrea Gerhardinger, Gianni Lisini*

13:40
**FR3.101.2** **URBAN LAND-USE MULTI-SCALE TEXTURAL ANALYSIS**
*Fabio Pacifici, Marco Chini, William J. Emery*

14:00
**FR3.101.3** **UTILIZING SPACEBORNE IMAGERY FOR VULNERABILITY ASSESSMENT: POTENTIALS AND PERSPECTIVES**
*Achim Roth, Hannes Taubenböck, Thomas Esch, Harald Mehl*

14:20
**FR3.101.4** **MONITORING THE EXTENT AND INTENSITY OF URBAN AREAS GLOBALLY USING THE FUSION OF MODIS 500M RESOLUTION SATELLITE IMAGERY AND ANCILLARY DATA SOURCES**
*Annemarie Schneider, Mark Friedl, David Potere*

14:40
**FR3.101.5** **A COMPARISON OF LANDSCAPE PATTERN INDICES ON TWO DIFFERENT LAND USE AND COVER MAPS OF DELHI INDIA**
*Elizabeth Wentz*

## FR3.102: Friday, July 11, 13:20 - 15:00

**FR3.102** **Polarimetric SAR Image Segmentation and Analysis**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 102
Co-Chairs: Henning Skriver and Emmanuel Trouve

13:20
**FR3.102.1** **SEGMENTATION OF POLARIMETRIC SAR DATA BASED ON THE FISHER DISTRIBUTION FOR TEXTURE MODELING**
*Lionel Bombrun, Jean-Marie Beaulieu*

13:40
**FR3.102.2** **AN IMPROVEMENT FOR THE UNSUPERVISED WISHART FREEMAN CLASSIFICATION WITH FULLY POLARIMETRIC SAR DATA**
*Fang Cao, Wen Hong, Eric Pottier*

14:00
**FR3.102.3** **ENHANCED MILITARY TARGET DISCRIMINATION USING ACTIVE AND PASSIVE POLARIMETRIC IMAGERY**
*Daniel A. Lavigne, Mélanie Breton, Mario Pichette, Vincent Larochelle, Jean-Robert Simard*

14:20
**FR3.102.4** **A MARKOV CHAIN CFAR DETECTOR FOR POLARIMETRIC DATA USING ADAPTIVE LINEAR DISCRIMINANT ANALYSIS**
*Chuhong Fei, Ting Liu, George Lampropoulos, Ramin Sabry, Kevin Murnaghan*

14:40
**FR3.102.5** **CLASSIFICATION OF POLARIMETRIC SAR IMAGES USING THE DEGREE OF POLARIZATION AND THE CO-POLARIZED PHASE DIFFERENCE**
*Yisok Oh, Geba Chang*

## FR3.103: Friday, July 11, 13:20 - 15:00

**FR3.103** **Sea Ice as an Indicator for Climate Change II**
Session Type: Oral-Invited
Time: Friday, July 11, 13:20 - 15:00
Place: Room 103
Co-Chairs: Stephen Howell and Mohammed Shokr

13:20
**FR3.103.1** **SEA ICE MICROWAVE EMISSION PROCESS SIMULATIONS**
*Rasmus Tonboe, Leif Toudal Pedersen, Gorm Dybkjær*

13:40
**FR3.103.2** **SEA ICE VOLUME FLUX THROUGH FRAM STRAIT FROM COMBINED SATELLITE REMOTE SENSING DATA FOR 2003 TO 2007**
*Gunnar Spreen, Stefan Kern, Detlef Stammer*

14:00
**FR3.103.3** **ISSUES ON SEA ICE PARAMTER RETRIEVAL FROM SPACEBORNE OBSERVATIONS**
*Mohammed Shokr*

14:20
**FR3.103.4** **MONITORING THE ARCTIC SEA ICE MELT SEASON LENGTH USING SATELLITE PASSIVE MICROWAVE DATA**
*Thorsten Markus, Jeffrey Miller, Julienne Stroeve*

14:40
**FR3.103.5** **ANALYSIS OF WINDSAT DATA OF ARCTIC SEA ICE**
*Parag Narvekar, Georg Heygster, Rasmus Tonboe, Thomas Jackson*

## FR3.104: Friday, July 11, 13:20 - 15:00

**FR3.104** **Microwave Remote Sensing for Land Use and Land Cover Change**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 104
Co-Chairs: Brian Hornbuckle and John Galantowicz

13:20
**FR3.104.1** **TERRASAR-X/SPOT-5 FUSED IMAGES FOR SUPERVISED LAND COVER CLASSIFICATION**
*Alessandro Burini, Cosimo Putignano, Fabio Del Frate, Giorgio Licciardi, Giovanni Schiavon, Domenico Solimini*

13:40
**FR3.104.2** **ASSESSMENT ON THE IMPROVEMENT OF THE LAND USE/LAND COVER CLASSIFICATION IN AMAZON USING ALOS PALSAR POLARIMETRIC DATA**
*Luciano Vieira Dutra, Corina Costa Freitas, Graziela Balda Scofield, José Claudio Mura, Sumaia Resegue Aboud-Neta, Rogerio Galante Negri, João Roberto Santos, Marcos Timbo Elmiro, Sidnei J. S. Sant'Anna*

14:00
**FR3.104.3** **LAND COVER MAPPING IN CENTRAL BENIN (WEST AFRICA) BY A COMBINED APPROACH OF MULTI-FREQUENT SAR AND MULTI-SPECTRAL SATELLITE IMAGERY USING MODERN CLASSIFIERS**
*Matthias Braun, Hans-Peter Thamm, Björn Waske*

14:20
**FR3.104.4** **MICROWAVE EMISSIVITY SIMILARITIES AND VARIATIONS RELATED TO LAND COVER TYPE IN THE TROPICS**
*Alan Lipton, Jean-Luc Moncet, John Galantowicz, Pan Liang*

14:40
**FR3.104.5** **COMPARISON OF POLARIMETRIC CHANGE DETECTION METHODS ON ALOS PALSAR IMAGES OVER FINLAND**
*Matthieu Molinier, Yrjö Rauste*

## FR3.107: Friday, July 11, 13:20 - 15:00

**FR3.107** **Hyperspectral Image Analysis for Detection and Classification**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 107
Co-Chairs: Lori Bruce and Arno Duijster

13:20
**FR3.107.1** **OVERCOMING THE SMALL SAMPLE SIZE PROBLEM IN HYPERSPECTRAL CLASSIFICATION AND DETECTION TASKS**
*Saurabh Prasad, Lori Bruce*

13:40
**FR3.107.2** **A NEW APPROACH FOR SPATIO-SPECTRAL FEATURE-SELECTION FOR SENSORS WITH NOISY AND OVERLAPPING SPECTRAL BANDS**
*Biliana Paskaleva, Majeed Hayat, Woo-Yong Jang, Sanjay Krishna*

14:00
**FR3.107.3** **HYPERSPECTRAL BAND SELECTION VIA CLUSTERING ALGORITHMS**
*Barat Mojaradi, Hamid Abrishami Moghadam, Mohammad Javad Valadan Zoej*

14:20
**FR3.107.4** **DIMENSION REDUCTION FOR HYPERSPECTRAL IMAGE CLASSIFICATION VIA SUPPORT VECTOR BASED FEATURE EXTRACTION**
*Cheng-Hsuan Li, Bor-Chen Kuo, Chin-Teng Lin, Chih-Cheng Hung*

14:40
**FR3.107.5** **DIMENSIONALITY REDUCTION AND CLASSIFICATION BASED ON ANT COLONY ALGORITHM FOR HYPERSPECTRAL REMOTE SENSING IMAGE**
*Shuang Zhou, Junping Zhang, Baoku Su*

## FR3.108: Friday, July 11, 13:20 - 15:00

**FR3.108** **Microwave Synthetic Aperture Radiometers II**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 108
Co-Chairs: Niels Skou and Jeff Piepmeier

13:20
**FR3.108.1** **COMPARISON OF SENSITIVITIES GENERATED BY REAL APERTURE AND SYNTHETIC APERTURE RADIOMETERS**
*Jingye Yan, Ji Wu, Manuel Martín-Neira, Hao Liu, Shenwei Zhang, Heguang Liu, Jing-Shan Jiang*

13:40
**FR3.108.2** **CALIBRATION CONSISTENCY TOOL FOR INTERFEROMETRIC RADIOMETERS**
*Verónica González-Gambau, Francesc Torres, Manuel Martín-Neira*

14:00
**FR3.108.3** **INTERFEROMETRIC RADIOMETERS: FRINGE-WASHING FUNCTION ESTIMATION WRAP-UP**
*Nuria Duffo, Francesc Torres, Ignasi Corbella, Manuel Martín-Neira*

14:20
**FR3.108.4** **SUCCESS CRITERIA TOOL IN EMC TESTS FOR INTERFEROMETRIC RADIOMETERS**
*Verónica González-Gambau, Francesc Torres, Francisco-Javier Benito, Josep Closa, Manuel Martín-Neira*

14:40
**FR3.108.5** **PROTOTYPE DEVELOPMENT OF AN 8MM BAND 2-DIMENSIONAL APERTURE SYNTHESIS RADIOMETER**
*Yong Xue, Jungang Miao, Guolong Wan, Anyong Hu, Feng Zhao, Huaming Wu*

## FR3.109: Friday, July 11, 13:20 - 15:00

**FR3.109** **Electromagnetic Methods for Remote Sensing I**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 109
Co-Chairs: Stefan Auer and Kuan-Shan Chen

13:20
**FR3.109.1** **REQUIREMENTS FOR MODEL-BASED POLARIMETRIC DECOMPOSITIONS**
*Jakob van Zyl, Motofumi Arii, Yunjin Kim*

13:40
**FR3.109.2** **EFFECT OF FOREST STRUCTURE ON SCATTERING CENTER HEIGHT FROM MODEL AND SAR DATA**
*Wenjian Ni, Guoqing Sun, Zhifeng Guo, Wenhan Qin*

14:00
**FR3.109.3** **RADAR VOLUME BACKSCATTER FROM SPATIALLY EXTENDED GEOPHYSICAL TARGETS IN "SLICE" APPROACH**
*Boris Yurchak*

14:20
**FR3.109.4** **GROUND SCATTERING ANALYSIS TO IDENTIFY TARGETS FOR REFRACTIVITY FIELD ESTIMATION**
*Jason Fritz, V. Chandrasekar*

14:40
**FR3.109.5** **FAST AND ACCURATE RADIATIVE TRANSFER IN THE MICROWAVE WITH OPTIMUM SPECTRAL SAMPLING**
*Alan Lipton, Jean-Luc Moncet, Gennady Uymin, Katherine Quinn, Sid-Ahmed Boukabara*

## FR3.110: Friday, July 11, 13:20 - 15:00

**FR3.110** **Vegetation 3D Structure: Combining Lidar and Radar I**
Session Type: Oral-Invited
Time: Friday, July 11, 13:20 - 15:00
Place: Room 110
Co-Chairs: Marc Simard and Kostas Papathanassiou

13:20
**FR3.110.1** **VEGETATION 3D STRUCTURE: COMBINING LIDAR AND INSAR**
*Marc Simard*

13:40
**FR3.110.2** **INSAR/LIDAR/OPTICAL DATA FUSION FOR VEGETATION HEIGHT AND BIOMASS ESTIMATION IN SUPPORT OF THE NORTH AMERICAN CARBON PROGRAM**
*Josef Kellndorfer, Wayne Walker, Elizabeth LaPoint*

14:00
**FR3.110.3** **SAR AND LIDAR FUSION FOR FOREST STRUCTURE ESTIMATION: SIMULATION STUDY**
*Leland Pierce, Kamal Sarabandi*

14:20
**FR3.110.4** **SYNERGISTIC USE OF VERY HIGH FREQUENCY RADAR AND PROFILING LIDAR FOR ESTIMATING BIOMASS IN HARDWOOD AND MIXED FORESTS**
*Asim Banskota, Randolph Wynne, Patrick Johnson, Bomono Emessiene, Valerie Thomas*

14:40
**FR3.110.5** **POLARIMETRIC SAR INTERFEROMETRY FOR FOREST STRUCTURE PARAMETER ESTIMATION: POTENTIAL AND LIMITATIONS**
*Konstantinos Papathanassiou, Seung-Kuk Lee, Florian Kugler, Irena Hajnsek*

## FR3.111: Friday, July 11, 13:20 - 15:00

**FR3.111** **Data Assimilation and Ensemble Filtering**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 111
Co-Chairs: Ross Hoffman and Peter Chu

13:20
**FR3.111.1** **DATA ASSIMILATION OF MODEL PREDICTIONS OF LONG-TIME EVOLUTION OF CS-137 DEPOSITION ON TERRAIN**
*Radek Hofman, Petr Pecha*

13:40
**FR3.111.2** **COMBINING CORRELATION METHOD AND FEATURE MODEL IN AN ASSIMILATION SCHEME TO IMPROVE OCEAN FORECASTING CAPABILITIES**
*Manlio Mano, Audalio Torres, Alvaro Coutinho*

14:00
**FR3.111.3** **ASSIMILATING REMOTE SENSING BASED SOIL MOISTURE IN THE BEPS MODEL FOR AGRICULTURAL DROUGHT ASSESSMENT**
*Lin Zhu, Jing M. Chen, Qiming Qin, Mei Huang, Lianxi Wang, Jianping Li, Bao Cao*

14:20
**FR3.111.4** **ENSEMBLE DATA ASSIMILATION SIMULATION EXPERIMENTS FOR THE COASTAL OCEAN: IMPACT OF DIFFERENT OBSERVED VARIABLES**
*Ross Hoffman, Rui Ponte, Eric Kostelich, Alan Blumberg, Istvan Szunyogh, Sergey Vinogradov*

14:40
**FR3.111.5** **ASSIMILATING EARTH OBSERVATION DATA INTO LAND SURFACE MODELS.**
*Tristan Quaife, Philip Lewis, Martin De Kauwe*

## FR3.203: Friday, July 11, 13:20 - 15:00

**FR3.203** **Clouds and Precipitation III**
Session Type: Oral-Contributed
Time: Friday, July 11, 13:20 - 15:00
Place: Room 203
Co-Chairs: Kultegin Aydin and Robert Meneghini

13:20
**FR3.203.1** **PHASED ARRAY RADAR POLARIMETRY FOR WEATHER SENSING: CHALLENGES AND OPPORTUNITIES**
*Guifu Zhang, Richard Doviak, Dusan Zrnic, Jerry Crain*

13:40
**FR3.203.2** **ICE WATER CONTENT ESTIMATION IN CLOUDS USING RADAR REFLECTIVITY AND DUAL-FREQUENCY RATIO AT 94 AND 220 GHZ**
*Kultegin Aydin, Thomas M. Walsh*

14:00
**FR3.203.3** **COMPARISION OF HYDROLOGIC MODEL RESULTS FROM RAIN GAUGE, NEXRAD STAGE III, AND TRMM 3B42 PRECIPITATION DATA**
*Kenneth Tobin, Marvin Bennett*

14:20
**FR3.203.4** **INTERACTIVE GENERATION OF REALISTIC PARTICLE DESIGNS FOR SCATTERING CALCULATIONS USING DDSCAT**
*Kwo-Sen Kuo, Eric A. Smith*

14:40
**FR3.203.5** **REFLECTIVITY AND DIFFERENTIAL REFLECTIVITY RAINFALL ALGORITHM PERFORMANCE AT X-BAND**
*Eugenio Gorgucci, Luca Baldini, V. Chandrasekar, Minda Le*

## FR3.210: Friday, July 11, 13:20 - 15:00

**FR3.210** **AMSR-E II**
Session Type: Oral-Invited
Time: Friday, July 11, 13:20 - 15:00
Place: Room 210
Co-Chairs: Akira Shibata and Josefino Comiso

13:20
**FR3.210.1** **INTERCOMPARISON OF SST RETRIEVED FROM AMSR-E AND WINDSAT**
*Akira Shibata*

13:40
**FR3.210.2** **AMSR-E STANDARD AND HIGH RESOLUTION SEA ICE DATA**
*Josefino Comiso*

14:00
**FR3.210.3** **SENSITIVITY OF BRIGHTNESS TEMPERATURES FROM AMSR-E LOW FREQUENCY CHANNELS TO THE SEASONAL EVOLUTION OF LAKE ICE THICKNESS**
*Kyung-Kuk Kang, Claude R. Duguay, Stephen Howell, Chris P. Derksen, Richard E. J. Kelly*

14:20
**FR3.210.4** **A SIMPLE METHOD FOR LAND SURFACE TEMPERATURE RETRIEVAL FROM AMSR-E**
*Shengli Wu, Xiaoxiang Zhu, Hu Yang*

14:40
**FR3.210.5** **ALGORITHM DEVELOPMENT OF PHASE CHANGED WATER CONTENT OF BARE SOIL IN FREEZE/THAW PROCESSES BASED ON THE CONFIGURATION OF AMSR/E**
*Lixin Zhang, Shaojie Zhao, Linna Chai, Bo Li*

## FR4.101: Friday, July 11, 15:20 - 17:00

**FR4.101** **Urban Remote Sensing VIII**
Session Type: Oral-Invited
Time: Friday, July 11, 15:20 - 17:00
Place: Room 101
Co-Chairs: Paolo Gamba and Annemarie Schneider

15:20
**FR4.101.1** **GEOCDX: AN AUTOMATED CHANGE DETECTION & EXPLOITATION SYSTEM FOR HIGH RESOLUTION SATELITE IMAGERY**
*Ozy Sjahputera, Curt H. Davis, Brian Claywell, Nicholas Hudson, James Keller, Michael Vincent, Yonghong Li, Matthew Klaric, Chi-Ren Shyu*

15:40
**FR4.101.2** **JOINT FILTERING OF SAR INTERFEROMETRIC PHASE AND AMPLITUDE DATA IN URBAN AREAS BY TV MINIMIZATION**
*Loic Denis, Florence Tupin, Jerome Darbon, Marc Sigelle*

16:00
**FR4.101.3** **4D SAR IMAGING OF URBAN AREAS**
*Gianfranco Fornaro, Diego Reale, Francesco Serafino*

16:20
**FR4.101.4** **MULTIPLE OBJECT RECOGNITION FROM MULTI SPECTRAL IMAGEY AND LASER SCANNING DATA USING MULTI AGENT MODEL**
*Taehun Yoon, Toni Schenk, Beata Csatho*

16:40
**FR4.101.5** **CHANGE DETECTION FOR BRIDGES OVER WATER IN AIRBORNE AND SPACEBORNE SAR DATA**
*Erich Cadario, Hermann Gross, Horst Hammer, Karsten Schulz, Antje Thiele, Ulrich Thoennessen, Uwe Soergel, Dan-Johan Weydahl*

## FR4.104: Friday, July 11, 15:20 - 17:00

**FR4.104** **Retrieval of Water and Energy Balance Parameters II**
Session Type: Oral-Contributed
Time: Friday, July 11, 15:20 - 17:00
Place: Room 104
Co-Chairs: Kaicun Wang and John Galantowicz

15:20
**FR4.104.1** **ESTIMATION OF SURFACE NET RADIATION FROM SOLAR SHORTWAVE RADIATION MEASUREMENTS.**
*Kaicun Wang, Shunlin Liang*

15:40
**FR4.104.2** **LAND SURFACE ALBEDO AND DOWN-WELLING SHORT-WAVE RADIATION RETRIEVALS USING HIGH FREQUENCY OBSERVATIONS FROM MSG GEOSTATIONARY SATELLITE**
*Dominique Carrer, Bernhard Geiger, Jean-Louis Roujean, Olivier Hautecoeur, Catherine Meurey, Laurent Franchistéguy*

16:00
**FR4.104.3** **UNDERSTANDING HYDROLOGICAL CYCLE DYNAMICS DUE TO CHANGING LAND USE AND LAND COVER: CONGO BASIN CASE STUDY**
*Namrata Batra, Yi-Chen E. Yang, Hyun Il Choi, Praveen Kumar, Ximing Cai, Charlotte De Fraiture*

16:20
**FR4.104.4** **ALONG TRACK INTERFEROMETRY ON RHONE RIVER**
*Jean-Francois Nouvel, Pascale Dubois-Fernandez, Pascal Kosuth*

16:40
**FR4.104.5** **UNMIXING A VARIABLE ENDMEMBER LINEAR MIXTURE MODEL FOR ESTIMATION OF HEAT ISLAND MITIGATION BY GREEN VEGETATION**
*Kenta Obata, Hiroki Yoshioka, Hrokazu Yamamoto*

## FR4.107: Friday, July 11, 15:20 - 17:00

**FR4.107** **Optical Sensor Technology**
Session Type: Oral-Contributed
Time: Friday, July 11, 15:20 - 17:00
Place: Room 107
Co-Chairs: John Kerekes and Jerrold Baum

15:20
**FR4.107.1** **APEX – AN INNOVATIVE AIRBORNE HYPERSPECTRAL RESEARCH PLATFORM**
*Klaus Itten, Jens Nieke, Koen Meuleman, Franscesco Dell'Endice, Andreas Hueni, Edoardo Alberti*

15:40
**FR4.107.2** **SUPPORTING FACILITIES FOR THE AIRBORNE IMAGING SPECTROMETER APEX**
*Jens Nieke, Klaus Itten, Koen Meuleman, Peter Gege, Andreas Hueni, Francesco Dell'Endice, Gerd Ulbrich, Roland Meynart*

16:00
**FR4.107.3** **SENTINEL-3 LAND SYNERGY PRODUCTS FOR SPOT VEGETATION CONTINUITY**
*Pieter Kempeneers, Gilbert Saint, Else Swinnen, Eric Gontier*

16:20
**FR4.107.4** **AN END-TO-END MODELING & SIMULATION CAPABILITY FOR ASSESSING THE PERFORMANCE OF WEATHER DATA PRODUCTS PRODUCED BY ENVIRONMENTAL SENSORS & SATELLITE SYSTEMS**
*Merit Shoucri, Bruce Hauss*

16:40
**FR4.107.5** **METHODS FOR CROSSTALK CHARACTERIZATION, IMPACT ASSESSMENT, AND MITIGATION IN DUAL GAIN IMAGING SENSORS**
*Carl Fischer, William Bicknell*

## FR4.108: Friday, July 11, 15:20 - 17:00

**FR4.108** **Low-cost Aerial and UAV Remote Sensing**
Session Type: Oral-Contributed
Time: Friday, July 11, 15:20 - 17:00
Place: Room 108
Co-Chairs: John Antoniades and John Cipar

15:20
**FR4.108.1** **MAPPING OF NATURAL DISASTERS USING A LOW-COST AERIAL DATA ACQUISITION PLATFORM**
*Hannes Raggam, Roland Wack, Karlheinz Gutjahr, Mathias Schardt*

15:40
**FR4.108.2** **LIGHTER-THAN-AIR IMAGING SYSTEM USING AN UNCOOLED INFRARED CAMERA**
*Andrew Jessup, Daniel Clark*

16:00
**FR4.108.3** **LOW-COST MULTISPECTRAL AERIAL IMAGING USING AUTONOMOUS RUNWAY-FREE SMALL FLYING WING VEHICLES**
*Austin Jensen, Marc Baumann, Yangquan Chen*

16:20
**FR4.108.4** **REAL-TIME UAV ORTHO-VIDEO GENERATION**
*Daiyong Wei, Guoqing Zhou*

16:40
**FR4.108.5** **MICROASAR: A SMALL, ROBUST LFM-CW SAR FOR OPERATION ON UAVS AND SMALL AIRCRAFT**
*Matthew Edwards, David Madsen, Craig Stringham, Alex Margulis, Brandon Wicks, David G. Long*

## FR4.109: Friday, July 11, 15:20 - 17:00

**FR4.109** **Electromagnetic Methods for Remote Sensing II**
Session Type: Oral-Contributed
Time: Friday, July 11, 15:20 - 17:00
Place: Room 109
Co-Chairs: Christophe Bourlier and Kuan-Shan Chen

15:20
**FR4.109.1** **RAY TRACING FOR SIMULATING REFLECTION PHENOMENA IN SAR IMAGES**
*Stefan Auer, Stefan Hinz, Richard Bamler*

15:40
**FR4.109.2** **RADAR SIGNATURE ANALYSIS OF URBAN STRUCTURES**
*Markus Peichl, Timo Kempf, Stephan Dill*

16:00
**FR4.109.3** **UNDERSTANDING THE RADAR INTERACTION WITH THE RIVER ICE COVER AT DIFFERENT POLARISATIONS (HH, VV, AND VH) AND FREQUENCIES (C, X, L).**
*Imen Gherboudj, Monique Bernier, Robert Leconte*

16:20
**FR4.109.4** **SIMULATIONS OF L-BAND BRIGHTNESS TEMPERATURE OF A QUASI-PERIODIC CORN CANOPY**
*Cuneyt Utku, Roger Lang*

16:40
**FR4.109.5** **EMISSIVITIES OF RANDOM ROUGH SURFACE OVER LAYERED MEDIA**
*Peng Xu, Leung Tsang, Kun-Shan Chen*

## FR4.110: Friday, July 11, 15:20 - 17:00

**FR4.110** **Vegetation 3D Structure: Combining Lidar and Radar II**
Session Type: Oral-Invited
Time: Friday, July 11, 15:20 - 17:00
Place: Room 110
Co-Chairs: Marc Simard and Kostas Papathanassiou

15:20
**FR4.110.1** **COMBINING LIDAR AND INSAR OBSERVATIONS OVER THE HARVARD AND DUKE FORESTS FOR MAKING WIDE AREA MAPS OF VEGETATION HEIGHT**
*Paul Siqueira, Scott Hensley, Bruce Chapman, Razi Ahmed*

15:40
**FR4.110.2** **PENETRATION INTO VEGETATION CANOPIES MEASURED BY MULTIWAVELENGTH AND POLARIMETRIC INSAR**
*Howard Zebker*

16:00
**FR4.110.3** **ACHIEVING FULL 3D CANOPY STRUCTURE FROM LIDAR AND MULTI-ANGULAR DATA**
*Mitchell Schull, Sangram Ganguly, Arindam Samanta, Alan Strahler, Curtis E. Woodcock, Crystal Schaaf, Wenge Ni-Meister, Jicheng Liu, Glenn J. Newnham, Tian Yao, Feng Zhao, Xiaoyuan Yang, Qingling Zhang, Miguel O. Román III, Shihyan Lee, Zhousen Wang, Yanmin Shuai, Nikolay Shabanov, Ranga Myneni, Yuri Knyazikhin*

16:20
**FR4.110.4** **THE POTENTIAL OF COMBINED LIDAR AND SAR DATA IN RETRIEVING FOREST PARAMETERS USING MODEL ANALYSIS**
*Zhifeng Guo, Guoqing Sun, K. Jon Ranson, Wenjian Ni, Wenhan Qin*

16:40
**FR4.110.5** **INVESTIGATION ON TREE HEIGHT RETRIEVAL WITH POLARIMETRIC SAR INTERFEROMETRY**
*Lulu Tan, Ruliang Yang*

## FR4.111: Friday, July 11, 15:20 - 17:00

**FR4.111** **Data-Validated Inverse Methods**
Session Type: Oral-Contributed
Time: Friday, July 11, 15:20 - 17:00
Place: Room 111
Chair: Edwin Marengo

15:20
**FR4.111.1** **CROP LAI RETRIEVAL FROM MODIS BIDIRECTIONAL REFLECTANCE OBSERVATIONS USING PARTICLE FILTER ALGORITHM AND A CROP GROWTH MODEL**
*Dongwei Wang, Jindi Wang, Yongmei Chen, Haobo Lin, Shunlin Liang, Zhiqiang Xiao*

15:40
**FR4.111.2** **RETRIEVAL OF LEAF AREA INDEX BY COUPLING RADIATIVE TRANSFER MODEL AND PROCESS MODEL**
*Zhiqiang Xiao, Shunlin Liang, Jindi Wang*

16:00
**FR4.111.3** **SINGULAR SPECTRUM ANALYSIS FOR FILLING GAPS AND REDUCING UNCERTAINTIES OF MODIS LAND PRODUCTS**
*Dongdong Wang, Shunlin Liang*

16:20
**FR4.111.4** **A METHODOLOGY FOR SELECTION OF OPTIMAL VIEWING ANGLES FOR AN ACCURATE ESTIMATION OF LEAF AREA INDEX BASED ON INFORMATION THEORY**
*Yanjuan Yao, Qiang Liu, Qinhuo Liu, Wenjie Fan, Xiaowen Li*

16:40
**FR4.111.5** **IMPROVEMENT OF EARTHQUAKE PREDICTION BY USING GLOBAL SIGNAL ELIMINATION FROM ENVIRONMENTAL ELECTROMAGNETIC SIGNALS**
*Motoaki Mouri, Arao Funase, Ichi Takumi, Andrzej Cichocki, Hiroshi Yasukawa, Masayasu Hata*

## FR4.203: Friday, July 11, 15:20 - 17:00

**FR4.203** **Clouds and Precipitation IV**
Session Type: Oral-Contributed
Time: Friday, July 11, 15:20 - 17:00
Place: Room 203
Co-Chairs: Kultegin Aydin and Kenneth Tobin

15:20
**FR4.203.1** **NPOESS PRECIPITATION RETRIEVALS USING THE ATMS PASSIVE MICROWAVE SPECTROMETER**
*Chinnawat Surussavadee, David Staelin*

15:40
**FR4.203.2** **VALIDATION OF MULTILAYERED CLOUD PROPERTIES USING A-TRAIN SATELLITE MEASUREMENTS**
*Yuhong Yi, Patrick Minnis, Jianping Huang, Sunny Sun-Mack, Bing Lin, Kirk Ayers*

16:00
**FR4.203.3** **TOMOGRAPHIC RETRIEVAL OF CLOUD WATER DISTRIBUTIONS USING AN AIR-BORNE SCANNING MICROWAVE RADIOMETER**
*Dong Huang, Albin Gasiewski, Warren Wiscombe*

16:20
**FR4.203.4** **DEVELOPMENT AND OBSERVATION OF THE KU-BAND BROAD-BAND RADAR FOR METEOROLOGICAL APPLICATION**
*Eiichi Yoshikawa, Tomoaki Mega, Takeshi Morimoto, Tomoo Ushio, Zen Kawasaki*

16:40
**FR4.203.5** **THE SPATIAL AND TEMPORAL VARIATIONS OF HIGH CLOUDS BASED ON THE MODIS 1.375-MICRON CHANNEL MEASUREMENTS**
*Bo-Cai Gao, Rong-Rong Li*

## Paper Identifiers

| Example: | TU | 4 | . | 107 | . | 4 |
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| **Meaning:** | **Day** | **Time Block** | **Separator** | **Room** | **Separator** | **Sequence** |

### Day

MO.....Monday, July 7
TU.....Tuesday, July 8
WE.....Wednesday, July 9
TH.....Thursday, July 10
FR.....Friday, July 11

### Time Block

1.....First Morning Session..... 08:20 - 10:00
2.....Second Morning Session ..... 10:20 - 12:00
3.....First Afternoon Session ..... 13:20 - 15:00
4.....Second Afternoon Session ..... 15:20 - 17:00
P .....Poster Session ..... 17:00 - 18:30
.....Note: Posters will be up all day; authors will be present 17:00 - 18:30.

### Room

Oral.....Hynes Convention Center Rooms 101-111, 203, and 210.
Poster .....Poster Areas A-Z and AA-EE.

### Sequence

Oral.....Order of presentation.
Poster .....Board number (Complete poster board identifier is the Room plus the Sequence.)

## Topical Session Index

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