

## PUBLICATIONS

Dr. BIBHU PRASAD GANTHIA

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### Journals:

Sl. No.	TITLE	PUBLICATION	
1.	Machine Learning Strategy to Achieve Maximum Energy Harvesting and Monitoring Method for Solar Photovoltaic Panel Applications	International Journal of Photoenergy Hindawi	Journal SCIE Scopus Web of Science 2022
2.	Controller Design for the Pitch Control of an Autonomous Underwater Vehicle	Engineering, Technology & Applied Science Research 12(4)	Journal ESCI Scopus 2022
3.	JAYA Algorithm-Optimized Load Frequency Control of a Four-Area Interconnected Power System Tuning Using PID Controller	Engineering, Technology & Applied Science Research 12(4)	Journal ESCI Scopus 2022
4.	Modular unmanned aerial vehicle platform design: Multi-objective evolutionary system method	Computers & Electrical Engineering Pergamon Elsevier (99)	Journal SCIE Scopus Web of Science 2022
5.	Design and Implementation of a Floating PV Model to Analyse the Power Generation	International Journal of Photoenergy Hindawi	Journal SCIE Scopus Web of Science 2022
6.	Radial Basis Function Artificial Neural Network Optimized Stability Analysis in Modified Mathematical Modeled Type-III Wind Turbine System Using Bode Plot and Nyquist Plot	ECS Transactions IOP Publishing 107(1)	Journal SCopus Web of Science 2022
7.	A Comprehensive Examination For Band Gap Semiconductor Switches	Advances in Materials Science and Engineering Hindawi (Special Issue)	Journal SCIE Scopus 2021
8.	Hardware in Loop (THIL 402) Validated Type-I Fuzzy Logic Control of Type-III Wind Turbine System under Transients	Journal of Electrical Systems (ESCI) (Scopus) 17(1)	Journal ESCI Scopus 2021
9.	Implementation and Analysis of Mathematical Modeled Drive Train System in Type III Wind Turbines Using Computational Fluid Dynamics	Advances in Science and Technology Research Journal (ASTRJ) 16(1)	Journal (Web of Science) ESCI 2022
10.	Nonlinear Dynamic Measurement Method of Software Reliability based Data Mining	International Journal of System Assurance Engineering and Management Springer (ESCI) (Scopus)	Journal ESCI Scopus 2021

11.	Research on Frequency Parameter Detection of Frequency Shifted Track Circuit Based on Nonlinear Algorithm	Journal Nonlinear Engineering, Modeling and Application De Gruyter	Journal ESCI Scopus 2022
12.	Complex circuit simulation and nonlinear characteristics analysis of GaN power switching device	Journal Nonlinear Engineering, Modeling and Application De Gruyter	Journal ESCI Scopus 2022
13.	Load Frequency Control of Multi Area System Incorporating Distributed Generation Resources Using Closed Loop Cascade of 3DOFPID-FPID-TID Controller	Journal of Hunan University Natural Sciences	Journal ESCI Scopus 2021
14.	Fuzzy Logic Based Fault Current Prediction in Double Fed Induction Generator Based Wind Turbine System	Materials Today: Proceedings Publisher Elsevier (Scopus) 103(2)	Journal Scopus 2021
15.	Genetic Algorithm Optimized and Type-I Fuzzy Logic Controlled Power Smoothing of Mathematical Modeled Type-III DFIG based Wind Turbine System	Materials Today: Proceedings Publisher Elsevier (Scopus)	Journal Scopus 2021
16.	Implementation and Analysis of Mathematical Modeled Drive Train System in Type III Wind Turbines using Computational Fluid Dynamics	ASTRJ ESCI	Journal ESCI 2021
17.	Application of Series Connected FACTS Devices for Low Voltage Ride Through Capability Enhancement using Phasor Measurement Unit in Wind Energy Conversion System	Journal of Information and Computational Science UGC Care II Scopus 2021	Journal UGC Care II Scopus Vol. 11 Issue. 9 2021
18.	Design and Control of a Solar Photovoltaic Fed Asymmetric Multilevel Inverter Using Computational Intelligence	Journal Annals of the Romanian Society for Cell Biology Volume 25 Issue 6	Journal Scopus 2021
19.	Ann Based Speed Control of Brush less DC Motor Using DC DC Converter	Journal Design Engineering Scopus	Journal Scopus 2021
20.	Bridgeless Ac/Dc Converter & Dc-Dc Based Power Factor Correction with Reduced Total Harmonic Distortion	Journal Design Engineering Scopus	Journal Scopus 2021
21.	Grid Tied PV with Reduced THD Using NN and PWM Techniques	Journal Design Engineering Scopus	Journal Scopus 2021
22.	Matlab/Simulink Based THD Reduction Using Active Power Filters	Journal Design Engineering Scopus	Journal Scopus 2021
23.	Design and Implementation of Power System Performance Improvement by Using Pfc	Journal Design Engineering Scopus	Journal Scopus 2021

24.	Cascade H Bridge Multilevel Inverter with Pwm for Lower Thd, Emi & Rfi Reduction	Journal Annals of the Romanian Society for Cell Biology Volume 25 Issue 6	Journal Scopus 2021
25.	Steady State and Dynamic Comparative Analysis of PI and Fuzzy Logic Controller in Stator Voltage Oriented Controlled DFIG fed Wind Energy Conversion System	IEI Springer (Scopus) 101(3)	Journal 2020
26.	Fault Analysis of PI and Fuzzy Logic Controlled DFIG based Grid Connected Wind Energy Conversion System	IEI Springer (Scopus)	Journal 2020
27.	Low Voltage Ride Through Capability Enhancement Using Series Connected Fact Devices In Wind Energy Conversion System	JESTEC (Scopus) (Web of Science) 16(1)	Journal ESCI Scopus 2021
28.	Shunt Connected FACT devices for LVRT Capability Enhancement Methods in Wind Energy Systems	ETASR (Web of Science) 10(3)	Journal ESCI 2020
29.	Application of Hybrid FACTs Devices in DFIG based Wind Energy System for LVRT Capability Enhancements	JMCMS (Web of Science) 15(6)	Journal ESCI 2020
30.	Transient Analysis of Grid Integrated Stator Voltage Oriented Controlled Type-III DFIG driven Wind Turbine Energy System	JMCMS (Web of Science) 15(6)	Journal ESCI 2020
31.	Voltage Quality Improvement using a Series Connected Photovoltaic Distributed Generator System	International Journal of Advanced Trends in Computer Science and Engineering (IJATCSE) - Scopus Indexed - ISSN 2278 – 3091	Journal Scopus Vol. 8 No.5, September - October 2019
32.	Genetic Algorithm based Direct Torque Control of VSI fed Induction Motor Drive using MATLAB Simulation	International Journal of Advanced Trends in Computer Science and Engineering (IJATCSE) - Scopus Indexed - ISSN 2278 – 3091	Journal Scopus Vol. 8 No.5, September - October 2019
33.	Synchronization of Voltage Stability in AVR-PSS using Fuzzy Logic Controller	International Journal of Advanced Trends in Computer Science and Engineering (IJATCSE) - Scopus Indexed - ISSN 2278 – 3091	Journal Scopus Vol. 8 No.5, September - October 2019
34.	Simulation of Three Phase Voltage Controlled Soft Switching Start of Induction Motor Drive	International Journal of Recent Technology and Engineering (IJRTE)	Journal Scopus Volume-8 Issue-3 October 2019
35.	Dynamic and Transient Performance Study using AGC in Three Area Hydro Thermal Power System	Journal for Advance Research in Applied Sciences	Journal Volume VI Issue X October 2019
36.	Frequency Estimation of Distorted Signal using Recursive Least Square Filter	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	Journal Scopus Volume-8 Issue- 11 September 2019
37.	Power System Frequency Estimation Approach using Least Mean Square Filter based Algorithm	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	Journal Scopus Volume-8 Issue- 11 September 2019
38.	Micro-Grid Design and Protection System under Several	International Journal of	Journal

	Fault Conditions	Engineering and Advanced Technology (IJEAT)	Scopus Volume-8 Issue-6 August 2019
39.	Study of AGC in Two Area Hydro Thermal Power System	Springer (LNEE)	Journal Book Chapter
40.	Deregulated Power System Based Study of AGC Using PID and Fuzzy Logic Controller	IJAR (Thomson Reuters)	Journal Volume 04, Issue 06, June-2016
41.	Study of Particle Swarm Optimization Based Interconnected Automatic Generation Control System	IJRASET (Thomson Reuters)	Journal Volume 04, Issue 06, June-2016
42.	Study of Speed and Torque Characteristics of MATLAB-Simulink Designed PMSM: A Review	IRJET (NISCAIR)	Journal Volume: 03 Issue: 03   Feb-2016
43.	Study of Total Harmonic Distortion Using Space Vector Modulation Technique in Permanent Magnet Synchronous Motor	IRJET (NISCAIR)	Journal Volume: 02 Issue: 07   Oct-2015
44.	Minimization of Total Harmonic Distortion Using Pulse Width Modulation Technique	IOSR-JEEE (NASA-ADS)	Journal Volume 10, Issue: 3, June,2015

**Conference:**

Sl. No.	TITLE	PUBLICATION	
1.	Prototype Design of Modified Mechanical Drive Train Gear Box System using ANSYS for Wind Power Generation	IEEE (ICAIS) 2022	Conference Scopus (ICAIS) 2022
2.	Mechanical Design and Power Analysis of Type-III Wind Turbine System using Computational Fluid Dynamics	IEEE DELCON 2022	Conference Scopus (DELCON) 2022
3.	Sliding Mode Control and Genetic Algorithm Optimized Removal of Wind Power and Torque Nonlinearities in Mathematical Modeled Type-III Wind Turbine System	IEEE Indonesia Chapter	Conference Scopus CITSM 2021 Indonesia
4.	Smart Grid Based Multiagent System in Transmission Sector	IEEE ICIRCA 2021	Conference Scopus ICIRCA 2021 Coimbatore, India
5.	Artificial Ant Colony Optimized Direct Torque Control of Mathematically Modeled Induction Motor Drive using PI and Sliding Mode Controller	LNEE Springer	Conference Book Chapter Scopus 2020
6.	Genetic Algorithm Optimized Direct Torque Control of Mathematically Modeled Induction Motor Drive using PI and Sliding Mode Controller	LNEE Springer	Conference Book Chapter Scopus 2020
7.	Direct Torque Control of Mathematically Modeled Induction Motor Drive using PI-Type-I Fuzzy Logic Controller and Sliding Mode Controller	LNNS Springer (Accepted)	Conference Book Chapter Scopus 2020
8.	An Economic Rural Electrification Study Using Combined Hybrid Solar and Biomass-Biogas System	Elsevier Materials Today: Proceedings	Conference (PMME 2016)
9.	Carbon Reduction Potential Study in Combined Hybrid System for rural Electrification	Elsevier Materials Today: Proceedings	Conference (PMME 2016)
10.	Design and Analysis of Gravitational Search Algorithm based TCSC-Controller in Power System	Elsevier Materials Today: Proceedings	Conference (PMME 2016)

11.	A Variable Structured TCSC Controller for Power System Stability Enhancement	Elsevier Materials Today: Proceedings	Conference (PMME 2016)
12.	Automatic Generation Control Study in Two Area Reheat Thermal Power System	Institute of Physics (IOP Conference Series)	Conference (2016)
13.	Space Vector Pulse Width Modulation Fed Direct Torque Control of Induction Motor Drive using MATLAB-SIMULINK	IET-IEEE	Conference (EEECOS 2016)
14.	Maximum Efficiency Constrained Study of Dynamic Modeled PMSM using Augmented Lagrangian Genetic Algorithm Technique	IET-IEEE	Conference (EEECOS 2016)
15.	Stator Voltage Oriented Control Fed Transient Behavioural case study of DFIG Based Wind Energy Conversion System	IET-IEEE	Conference (EEECOS 2016)
16.	Stator Voltage Oriented Control Fed Modeling and Control of DFIG Based Wind Energy Conversion System	IET-IEEE	Conference (EEECOS 2016)
17.	Compensation of Voltage Sag Using DVR with PI Controller	IEEE	Conference (ICEEOT 2016)
18.	A Multiphase Interleaved Boost Converter for Grid-connected PV System	IEEE	Conference (MICROCOM 2016)
19.	Optimal Control Study in DFIG based Wind Energy Conversion System using PI & GA	IEEE	Conference (ICPEDC 2017)
20.	Analytical Study of MPPT based PV System using Fuzzy Logic Controller	IEEE	Conference (ICECDS 2017)
21.	Frequency Estimation Study in Power System using LMS Filter	IEEE	Conference (ICRIEICE 2018)
22.	Minimization of Noise and Distortion in Power System using RLS Filter	IEEE	Conference (ICRIEICE 2018)
23.	Genetic Algorithm based Comparative Study of Stability Gain in Wind Energy Conversion System	IEEE	Conference (ICRIEICE 2018)

**Book Chapter:**

Sl. No.	TITLE	PUBLICATION	
1.	Wind Turbines in Energy Conversion System: Types & Techniques	Energy System in Electrical Engineering Springer (Scopus)	Book Chapter Scopus 2021
2.	Comparative Analysis of Various Types of Control Techniques for Wind Energy Conversion System	Modeling and Control of Static Converters for Hybrid Storage Systems IGI Global (Web of Science) (Scopus)	Book Chapter Web of Science Scopus 2021
3.	Power Control of Modified Type-III DFIG based Wind Turbine System using 4-Mode-Type-I Fuzzy Logic Controller	Artificial Intelligence and Internet of Things for Renewable Energy Systems Series: Frontiers in Computational Intelligence De Gruyter (Web of Science) (Scopus)	Book Chapter Web of Science Scopus 2021

4.	Power Analysis using Various Types of Wind Turbines	Modeling and Control of Static Converters for Hybrid Storage Systems IGI Global (Web of Science) (Scopus)	Book Chapter Web of Science Scopus 2021
5.	Tribological Behavior of Coconut Shell–Fly Ash–Epoxy Hybrid Composites: Investigation	‘Natural Polymers: A Green Approach’ Apple Publishing	Book Chapter (ICNP 2018)

**Patents:**

Sl. No.	Title	Patent Application No.	Status
1.	Modified Rotor for Wind Turbine to Enhance the Efficiency	202031056823 (Indian)	Published
2.	Fuzzy Logic Based Fault Current Prediction In Double Fed Induction Generator Wind Turbine	20213107726 (Indian)	Published
3.	IoT Integrated Water Purifier With Ozone Generator	202031037257(Indian)	Published
4.	IoT Enabled and Timely Reminder Smart Medicine Box	202031048659 (Indian)	Published
5.	IoT based surface dust finding and cleaning machine	202041039495 (Indian)	Published
6.	IoT based natural UV passed room air sterilizer	202031038364 (Indian)	Published
7.	Artificial Intelligence based Fire Fighting Robot with Smart Sensors	202031041836 (Indian)	Published
8.	IoT Based Wearable Wireless Volume Control Device for any Electronic Gadgets	202041049423 (Indian)	Published
9.	IoT Based Modern Site Supervising Method	202031050746 (Indian)	Published
10.	Wearable and Smart Phone Coupled Women Safety Device	202031051817 (Indian)	Published
11.	A Renewable Energy Based Electrical Power Producing Method	202141026297 (Indian)	Published
12.	Smart Phone based Accident Detection System	202141015542 (Indian)	Published
13.	Early Corrosion Contaminant Prediction System on Turbine Blades	202141043526 (Indian)	Published
14.	Monitoring and Control of PV Systems Connected to the Grid with a Conventional Inverter and with and Interlaced Inverter	202131048431(Indian)	Published
15.	Active Control Applied to Wind Power for Attenuating Torque	202131050399 (Indian)	Published
16.	Monitoring and Evaluating the operation of Electronic Nose	202131050907(Indian)	Published
17.	A qualification and Labelling Procedure for Inverters for PV Systems	202131050804(Indian)	Published
18.	The Methodology of Frequency Characterization for more Complex Geometric in a Diesel Engine	202131060134(Indian)	Published
19.	Dynamic Interaction of DFIG and FSIIG Induction Wind Turbines Connected to the Same Distribution Feeder	202131060135(Indian)	Published
20.	Power Softening of Wind Generation using Fuzzy Logic and Energy Storage System	202131061655(Indian)	Published
21.	Home Automation and Power Management on Smart Home using	202231001150(Indian)	Published

	Cloud Server		
22.	COVID-19 Detection Model on Chest X-Ray Aiding an End to End Deep CNN	202231013973(Indian)	Published
23.	Impact of Relative Humidity and Temperature Reliant Thermal Conductivity of Insulation Materials on Heat Transfer Through the Building Envelope	202231015035(Indian)	Published
24.	Energy Management Controller for Distributing Electricity across the Micro Grid with Integrated Wind and Solar Storage by using DC and AC Buses	202231075196 (Indian)	Published

### **Grants:**

Sl. No.	Title	Patent Application No.	Status
1.	A System for Fault Analysis of PI and Fuzzy Logic Controlled DFIG-based Grid Connected Wind Energy Conversion System	2021102781(Australian)	Granted
2.	An IoT Connected Automatic Medication Dispenser	357350-001 (Indian)	Granted

### **Copyrights:**

Sl. No.	Title	Patent Application No.	Status
1.	Power Distribution System Planning for Smart Grid Applications using ANN	L-120075/2022	Copyright
2.	A Photo electrode and a Photovoltaic Assembly Composing the Inorganic Nanorods and a method of Forming the Same	7626/2022-CO/L	Copyright Applied
3.	System for Interfacing the Artificial Intelligence with Distributed Smart Grid	16750/2022-CO/L	Copyright Applied

### **Book Publications:**

SL. NO.	Name of the Material	Title	Published Media	ISBN No.
1.	Book	Power System Engineering	LAP LAMBERT Academic Publishing, Republic of Moldova	978-620-3-85379-7
2.	Book	Power System Transients	Walnut Publication, India	978-93-90785-85-8
3.	eBook	Control Techniques For Wind Energy Conversion System	BFC Publication, India	978-93-91455-53-8
4.	Book	Load Forecasting for Smart Grid Using MATLAB	LAP LAMBERT Academic Publishing	978-620-3-92663-7
5.	Book	Power System Engineering	LAP LAMBERT Academic Publishing	10:6203853798

6.	Book	Installation Commissioning and Testing of Electrical Machine	Blue Hill Publication, India	978-93-91539-77-1
7.	Book	Installation Commissioning and Testing of Transformer	Integrity Media Publication, India	978-93-81902-93-6
8.	Book	Installation Commissioning & Testing of Substation	Orange Publication, India	978-93-91543-20-4
9.	Book	Maintenance Scheduling of Substation Using Electrical and Mechanical Tools	Integrity Media Publication, India	978-93-81902-94-3
10.	Book	Maintenance schedule of Electrical Substation Equipments	Educreation Publication, India	978-93-91101-84-8
11.	Book	Biomass As Renewable Source of Energy	HSRA Publication India	978-93-5506-004-4
12.	Book	Design and Planning of Indoor and Outdoor Substation	HSRA Publication India	978-93-5506-071-6
13.	Book	Handbook On Electrical Substation: Design & Analysis	Blue Hill Publication, India	978-93-92929-20-5
14.	Book	An Introduction to MATLAB & Application to Power System	HSRA Publication India	978-93-5506-367-0
15.	Lab. Manual	Basic Electrical Engineering	IGIT, Sarang Lab. Manual	Online
16.	Lab. Manual	Power System - I Laboratory	IGIT, Sarang Lab. Manual	Online