

2016-2017 ANNUAL REPORT

UC Los Angeles Student Chapter

of the Earthquake Engineering Research Institute

Report Date: July 2, 2017



This report summarizes the membership and activities conducted by the University of California, Los Angeles (UCLA) Student Chapter of the Earthquake Engineering Research Institute during the 2016-2017 academic year.

MISSION & GOALS

UCLA EERI is the student chapter of the Earthquake Engineering Research Institute, a professional organization dedicated to the advancement of earthquake engineering research and education for the purpose of reducing seismic hazards worldwide (<https://www.eeri.org/>). UCLA EERI is open to all students in the Civil and Environmental Engineering Department as well as related fields (architecture, urban planning, etc.) The primary goals of the student chapter are to:

- Organize professional events for students to enrich educational experiences, facilitate career development, and expand horizons.
- Connect students to peers, researchers and professionals through seminars, field trips and info-sessions hosted by academics and practitioners.

MEMBERSHIP

The University of California - Los Angeles Student Chapter had 30 official members in 2016-2017. We also have around 70 students who are on the email list and would attend events held by the club. We aim to reach out to them to register as official members and be more involved in the coming academic year.

OFFICERS

The Board consisted of the following members:

Role	Name	EERI Member Number	Email	Student Status
President	Yi Tyan Tsai	16937	tsaiyityan@gmail.com	Graduate
Vice President	Soheil Kashani	16910	soheilka@ucla.edu	Undergraduate
Secretary	Bryan Hong	18438	bryanyh@ucla.edu	Undergraduate
Treasurer	Jason Kim	18437	lukee3@ucla.edu	Undergraduate
Webmaster	Mandro Eslami		mandro.es@gmail.com	Graduate
Structural Graduate Students Liaison	Saman Abdullah		eng.saman86@gmail.com	Graduate

FACULTY & INDUSTRY ADVISORS

Our faculty advisor is Professor Henry Burton of the Civil and Environmental Engineering Department at UCLA. His contact information is: E-mail hvburton@seas.ucla.edu, Phone (310) 825 - 2843.

MEMBERS

A complete list of members is shown below.

First name	Last name	Email	Year
Ada	Chang	adachang@ucla.edu	Sophomore
Agam	Tomar	agamtomar@ucla.edu	Ph.D.
Ai	Zhong	Aizhong@ucla.edu	Master
Alicia	Pedneault	apedneault@g.ucla.edu	Master
Arezo	Razavizadeh	arazad.sh12@gmail.com	Ph.D.
Brandon	Duong	usbduong33@ucla.edu	Sophomore
Christopher	Segura	segurac@ucla.edu	Ph.D.
Damian	Gutierrez	damianag3@gmail.com	Junior
Dario	Qiu	darioqiu18@gmail.com	Sophomore
Daniel	Nashed	daniel13sr@hotmail.com	Freshman
Denrick	Bautista	denrickbautista@yahoo.com	Master
Ellam	Moore		Ph.D.
Emmanuel	Flores	eflores2014@ucla.edu	Master
Eric	Roberts	eroberts22@g.ucla.edu	Junior
Grace	Parker	graceaparker@gmail.com	Ph.D.
Gian	Piatos	gianpiatos1@gmail.com	Master
Gurjot	Kohli	gskohli@ucla.edu	Sophomore
Hemanth	Kotaru	hemanthkotaru@g.ucla.edu	Master
Ho-Shing	Chau	hoshingc@ucla.edu	Senior
Jared	Rivera	jaredrivera2314@yahoo.com	Sophomore
Jonathan	Song	jonathan.song0307@gmail.com	Sophomore
Jason	Buenker	buenker2@gmail.com	Ph.D.
Jason	Kim	lukee3@g.ucla.edu	Sophomore
Jeff	Miao	jeffmiao0316@gmail.com	Master
Jia	Cui	lukecui31@gmail.com	Master
Jian	Xiao	Jianxiao@gmail.com	Master
John	Duong	jduong9@g.ucla.edu	Master
Joanna	Sanchez-Nunez	asancheznunez@ucla.edu	Junior
Joshua	Wang	joshuawang1996@gmail.com	Junior
Justine	Gee	Jvgee@g.ucla.edu	Senior
Kasey	Murakami	kcmurakami@gmail.com	Sophomore
Kioumars	Afshari	kafshari@ucla.edu	Ph.D.
Kheder	Alrazaa	kalrazaa@ucla.edu	Master

Margo	Giovanna		Post doc
Maria Giovanna	Durante	mgiodurante@gmail.com	Post doc
Mandro	Eslami	mandro@ucla.edu	Ph.D.
Mia	Reyes	mia.reyes10@gmail.com	Freshman
Michael	Weyant	mweyant1@g.ucla.edu	Junior
Namrata	Kakoti	kakoti.namrata@gmail.com	Master
Nanshan	Li	nanshan7596@gmail.com	Junior
Negin	Tauberg	naryaee@gmail.com	Ph.D.
Nilofar	Doorandish	Nilufar.dsh@gmail.com	Master
Ningyue	Xu	ningyuexu1993@gmail.com	Master
Paolo	Zimmaro	pzimmaro@ucla.edu	Post doc
Peng	Guo	pengguo@ucla.edu	Ph.D.
Peng-Yu	Chen	sam75782008@g.ucla.edu	Ph.D.
Rajik	Zaroukian	Rajikzaroukian@ucla.edu	Master
Shaz	Sho	granvillain@hotmail.com	Master
Saman	Abdullah	eng.saman86@gmail.com	Ph.D.
Shahrzad	Dastmalchi	shdstm@ucla.edu	Ph.D.
Sean	Ahdi	yes	Ph.D.
Sok	Chhay	chhay.sokhong@gmail.com	Master
Soheil	Kashani	Soheilka@ucla.edu	Senior
Stephan	Ahn	sahn1995@gmail.com	Junior
Vivek	Manickam	vivek.k.manickam@gmail.com	Master
Victor	Contreras	vcontreras@ucla.edu	Master
William	Yoshida	wyoshida@ucla.edu	Master
Xilin	Yuan	13752453785@163.com	Master
Yanhong	Liu	Liuyanhong09@outlook.com	Master
Tianshu	Wan	fianshuwan@hotmail.com	Master
Yi Tyan	Tsai	tsaiyityan@gmail.com	Ph.D.
Yiting	Wang	wangyiting1996@gmail.com	Sophomore
Yunji	Zhang	Zhang.yunjijames@gmail.com	Master
Yunzhu	Li	sirimus@g.ucla.edu	Master
Zeyu	Ni	nizeyu@gmail.com	Master
Zhenhua	Wei	zhenhuawei@ucla.edu	Ph.D.
Zhengxiang	Yi	Roveryi@g.ucla.edu	Master
Ziqi	Zhang	454063301@qq.com	Freshman

BUDGET & FINANCIALS

We started off Fall quarter of 2016 with \$3,422.77 in appropriation (\$1,030.07 financial). Most of our expenditures were on food and commodities for information sessions. (Averaging two info-sessions per quarter, it would be safe to make this approximation: $\$200 \times 2 \times 3 = \$1,200$. This total excludes the fees spent over summer as Prof. Burton covered approximately \$1,126.) The Civil & Environmental Engineering department manages the club account; most purchases were through purchase orders provided by the department. Our main sponsor is the LA Tall Building Sponsorship (\$1,000) and we also receive some funds from the EERI Membership.

CHAPTER ACTIVITIES

In the academic year of 2016-2017, the chapter has organized and participated in several key events. These include the general meeting at the beginning of the Fall quarter on October 13, 2016, which was well-attended by both undergraduate and graduate students, three research roundtables throughout the year (one every quarter), and the Friedman Family Visiting Professional Program on January 31, 2017.

First General Meeting, October 13, 2016

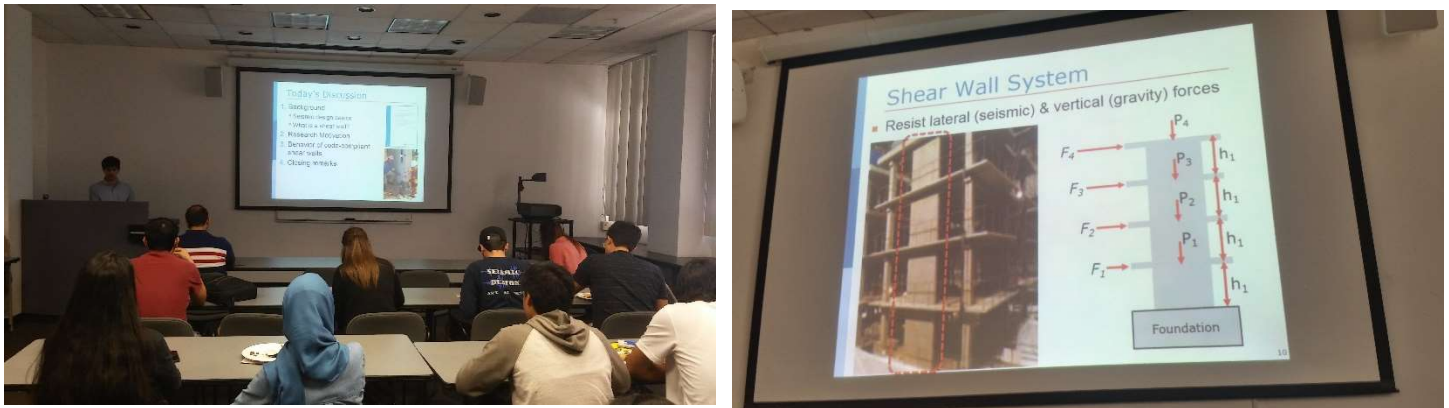
EERI at UCLA held the first general meeting in Boelter Hall 4275. The purpose of the meeting was to introduce the student chapter to students interested Earthquake Engineering. We went over the club objective, which is to raise awareness of earthquake impacts on the lives of people, to learn the advanced science and technologies that are used to reduce earthquake risks, and to advocate ways to improve seismic safety. To incorporate these missions, we introduced the major events of our club, including: Friedman Family Visiting Professional, annually hosted Seismic Design competition and research showcases. Among these events, Friedman Family Visiting Professional will the form of a luncheon. Professionals from a wide range of disciplines will interact with students so that they can enhance students understanding of practical issues, seismic technologies and real-life practices. These professionals will provide a distinct perspective of problem solving and innovative thinking so that students can appreciate practical matters. Besides the professional aspect of our student chapter, we will also provide hands-on work and research roundtables. In fact, EERI hosts the Seismic Design Competition annually. During the meeting, the project leaders of seismic design introduced the projects in much more detail and offered the members with ways of getting involved and contributing to the current team. In this project, students are able to apply their academic understanding of civil engineering matters to a small-scale project. In addition to the professional and project aspects of our club, students were informed with the research roundtables, where graduate research students or professors will present their research to any students interested in these thesis topics. Overall, the 35 students, attending the meeting, will have the flexibility of coming to any events, which should benefit their academic understanding and career prospects.

First Fall Research Roundtable, November 10, 2016

EERI at UCLA held our first research roundtable on Thursday, November 10 in Boelter Hall 4275. There was a total of 22 students, ranging from undergraduate students to post docs, signed up for the event. EERI hosts these roundtables for the purpose of enriching students at UCLA with knowledge on recent advancements in earthquake engineering research. Chris did so by giving a half an hour presentation on his research topic, "Seismic Performance Limitations of Slender Reinforced Concrete Structural Walls", in a luncheon setting. He started his presentation by first describing the basic seismic design principles, building codes, and shear walls system. Simply put, the shear wall system, constructed by reinforced concrete, acts to resist lateral and vertical loads. It is designed to yield in flexure, max moment at base, where it is called the ductile region or the "plastic hinge. In fact, Chris went over distributed web reinforcement and vertical reinforcement to give a background of his experiment setup for the wall panel test. After giving an overview of his experiments, he drew conclusion for his research and left some time for the audience to ask questions. The presentation was definitely beneficial

for all levels of students, and we are having our next roundtable on November 23rd, with a presentation topic on the Italian earthquake that happened recently.

Figure 1: Christopher Segura - Seismic Performance Limitations of Slender Reinforced Concrete Structural Walls



FRIEDMAN FAMILY VISITING PROFESSIONAL --- Dr. Farzad Naeim, Jan 31, 2017

Professional Bio:

Dr. Farzad Naeim is the President of Farzad Naeim, Inc. and CEO of Mehrain Naeim International Inc. both of Irvine California. Dr. Naeim is also an Adjunct Professor at UCI and a faculty member at the European School for Advanced Studies in Reduction of Seismic Risk (ROSE). He received his Ph.D. in Civil Engineering in 1982 and his J.D. with highest honors in 2002. In 2007, he received the Fazlur Khan Medal for lifetime achievements in seismic design of tall buildings from the Council on Tall Buildings and Urban Habitat. He has served two terms (1995 and 2011) as the President of the Los Angeles Tall Buildings Structural Design Council. Dr. Naeim is a Past-President and an honorary member of the Earthquake Engineering Research Institute (EERI). He is currently Chair of California's Strong Motion Instrumentation Advisory Committee and serves on the Seismic Advisory Board of Caltrans, Board of Expert Consultants of the Los Angeles Department of Water and Power (LADWP), and Advisory Council of the Southern California Earthquake Center (SCEC). Farzad has published four textbooks, more than 160 peer reviewed papers, and has developed 45 different software systems for earthquake engineering design and education. Dr. Naeim has served as Technical Director for many landmark structures in California and across the United States and has collaborated with researchers from Stanford, UCB, UCLA, USC, UCSD, UCI and University of British Columbia on various research projects.



Summary of Lectures:

"Performance Based Seismic Design of Tall Buildings"

The main lecture was integrated into the seminar series for graduate students in the structural and geotechnical tracks to reach a larger audience and is pitched at a more technically advanced level. The presentation provides an overview of the current framework of Performance Based Earthquake Engineering (PBEE) – what are the underlying concepts, the rationale for moving towards such a design philosophy and its application for design of tall buildings in the United States.

Dr. Naeim briefly went over the history leading up to the conception of the PBEE approach, and explained why

common prescriptive code provisions are incapable of addressing the needs of tall building design engineers. He identified the performance objectives associated with tall building design, and discussed the evolution of current component-based performance objectives to a more rigorous and fully probabilistic design approach. This included discussion of modeling and acceptance criteria associated with various performance based design guidelines, as well as special issues like the selection and scaling of ground motion records, soil foundation-structure interaction issues, and seismic instrumentation and peer reviews.

"Anatomy of Three Award Winning Engineering Projects"

The second presentation focused on the structural challenges and concerns encountered during the design of three landmark projects – the Walt Disney Concert Hall, Staples Center, and the Eiffel Tower II and is aimed at a more general undergraduate audience. Dr. Naeim began the presentation with the Walt Disney Concert Hall project. The structural challenge he faced was dealing with complex and irregular three-dimensional geometry. The architect, Frank Gehry, is known for specifying curved surfaces for his buildings. Dr. Farzad Naeim, who was the Vice President and General Counsel of John A. Martin & Associates, and his colleagues oversaw the design of the structural aspect of this unique and challenging project. The major difficulty as they first began was the inability to convert the architectural file and drawings to SAP2000. The structural team spent few nights programing the conversion codes so that SAP2000 can extract all the data from the architectural file. With the SAP2000 file, he had to test the structural model with at least a thousand degree of freedoms because most structural members were curved and attached to a giant gusset plate. On the field, some gusset plates were at least 10 feet wide and tall, which are uncommon in normal structures. One of the questions attendee asked was: "Why didn't you simplify the structural model?" Dr. Farzad Naeim's response was "This is the most simplified version of the architectural design. Structural Engineers are constantly challenged by these designs. Only by facing these challenges can we develop new ways of tackling various issues in the structural world." Structural engineers work intimately with architects to turn a vision into real life.



Figure 2: The Walt Disney Concert Hall



Figure 3: A fabricated curved beam

The second project Dr. Naeim talked about was the Staple Center Arena. The major difficulty was the roof of the structure. The roof truss system had to get built while hanging over the stadium. Dr. Naeim used SAP2000 to model the truss so that the contractor could follow his method. During the lecture, he also showed the students the bidding process of a project through videos and images. The architects were extremely detailed in visioning the Staple Center, including the interior and exterior.



Figure 4: MIT Stata Center Figure



Figure 5: Original and replicated Eiffel Tower

The Eiffel Tower II, built in Las Vegas, was the last project Dr. Naeim covered. Dr. Naeim was assigned to construct a duplicate of Eiffel Tower in Las Vegas. He studied personally the drawings of the real Eiffel Tower. He adjusted the angles between the truss members and other parts of the tower. He also had to consider the wind load since the elevator goes to the restaurant, which operates daily. He explained the pre-fabrication process of the entire tower, relying heavily on welding the pieces together and shipping them in sections to the construction site.

Results:

Dr. Naeim's visit under the Friedman Family Visiting Professional program was well-received and the students enjoyed interacting with such an engineering superstar. The event we organized have provided opportunities for the chapter members, undergraduate and graduate students, and faculty members to interact with Dr. Naeim, and all parties benefited from this exchange. As we wanted to reach a large number of graduate students, we wanted to have the visit coincide with the weekly graduate seminar, but as Dr. Naeim taught a class at UC Irvine in the morning, the time we have with him is limited to the latter half of the day. Coordinating the visit was initially challenging as communication between the EERI student chapter officers, faculty members, department staff, students, and Dr. Naeim himself – was required. We learnt that it is not possible to maximize every parameter and to prioritize our goals when organizing an event.



Figure 6: Dr. Naeim showing the construction site

Overall, the attendees, particularly for the second session were inspired by Dr. Naeim's work and the impact structural engineers make in the real world. Attendees enjoyed hearing the challenges he faced on the projects and his personal experience facing them. As the second session was targeted at a more general experience, we felt the topic was well suited and helped to encourage and inspire the attendees as they continue through their undergraduate studies.

SEISMIC DESIGN COMPETITION TEAM

The UCLA Seismic Design project has been ongoing since 2011. UCLA has achieved 1st place in 2012 and 2013, and 2nd place in 2015. At the competition, the balsa wood tower is not only subjected to simulated ground motions on a shake table, but is also judged based on architecture, analysis predictions, and construction quality. During the year, the project develops a Sketchup model (CAD) to meet the criteria of the rule book, which varies from year to year, and then the analysis team uses SAP2000, a structural analysis program, to develop a more realistic engineering model which may be subjected to load scenarios and earthquake ground motions. After the design phase, all the team members come together to build a 5-foot balsa wood structure; the project requires at least one prototype so that more accurate data can be extracted from the shaking test conducted in the structure's lab. The project provides many tools for students to experience real world challenges and unique problem-solving skills. The project also develops student's leadership, management, and communication skills. The project competes only once on an international level. Last year, the project competed in San Francisco; this year, the project competed in Portland from March 7th – 10th.

SDC Project Participants

Project Officers: Eric Roberts, Justine Gee, Stephan Ahn, Kasey Murakami, Bryan Hong.

Freshmen: Adie Alwen, Ahmed Al-Kashri, Alex Lee, Alyssa Yim, Bailey Uy, Beatrice Mititelu, Carlo Dela Rosa, Cheston Cheung, Claire Killian, Dhruv Iyer, Elena Sviatoslavsky, Ellie Kim, Gianna Furumoto, Grant Galloway, Ingrid Spielbauer, Jacob Stanley, Joceline Suhaimi, Kendall Kaufmann, Key Chung, Kristee Song, Kyle Rouen, Leo Sum, Lucas Hamera, Madeleine Plant, Nathan Chau, Philip Chung, Rachel Lien, Ryan Wong, Scott Kawakami, Shashwat Goel, Simone Saleby, Tony Chiang, Trevor Davis, Tyler Penn, Vivian Chong, Yash Kansal, Pooja Gupta, Leo Sum, Bryan Ong Wen Xi.

Sophomores: Ada Chang, Adam Wong, Brandon Duong, Colin Burrowes, Eric Luu, Gabe Blum, Glynn Baca, Justin Kuo, Kristen Lee, Lenn Kushigemachi, Mahsa Sheykholtan, Omar Issa, Tina Root, Jared Rivera.

Juniors: Casey Yamamoto, Isaac Carrera, Joshua Wang, Ke Shang(Andy), Key Chung, Michael Weyant, Rayan Fardoun, Visakan Vairavamoorthy, Zhenyu Huang (Lucas), Nate de Ropp.

Seniors: Chris Williams, Hon Lam Chan, Jacob Nissen, Lifeng Gao, Pok Cheng Lei David, Richard Lu, SungWoo Jo (Chip), Weiyang(Ray) Bai.

Grads: Christophe Bonneville, Namrata Kakoti.

SDC Selected Team Members

Name	EERI Member Number	Email	Role
Eric Roberts	17797	eroberts22@ucla.edu	Project Manager
Justine Gee	17759	jvgee@ucla.edu	Assistant Project Manager
Stephan Ahn	18406	sahn1995@gmail.com	Project Director
Bryan Hong	18438	bryanyh@ucla.edu	Project Director
Kasey Murakami	18441	kcmurakami@gmail.com	Project Director

Bryan Ong Wen Xi	19184	bryanongwenxi@gmail.com	Construction
Michael Weyant	19172	mweyant1@g.ucla.edu	Construction
Joshua Wang	18507	joshuawang1996@gmail.com	Construction
Ahmed Al-Kashri	19179	ahmedalk@g.ucla.edu	Construction
Jeffrey Kuo	19274	jeffwkuo@gmail.com	Architecture
Kylie Williams	19272	kyliea@ucla.edu	Architecture

SDC Team Financial Sponsors

A list of financial sponsors for the SDC team.

Name	Amount
Engineering Alumni Association	\$1,300
Amec Foster Wheeler	\$1,000
WJE	\$1,000
Los Angeles Tall Building Council	\$1,000
Malcolm Drilling	\$750
EERI SoCal	\$500
Walter P Moore	\$500
John A Martin Associates	\$300
Lam and Associates	\$200

Team results and lessons learned

The UCLA Seismic Design team competed in the 2017 Undergraduate Seismic Design competition in Portland, Oregon. After a year of hard work devoted to the project, the team showcased our product through a weeklong of judging. Overall, the team placed 13th out of 33 schools in the world, and 8th in the US. This final ranking is a result of a 2nd place in the analysis predicted score, a 14th place in the communication category, a 14th place in the architectural score, and a 22nd place in the final annual seismic cost. Even though the results did not meet the team's expectations, the team found room for improvements and they strive to do better in Los Angeles next year.

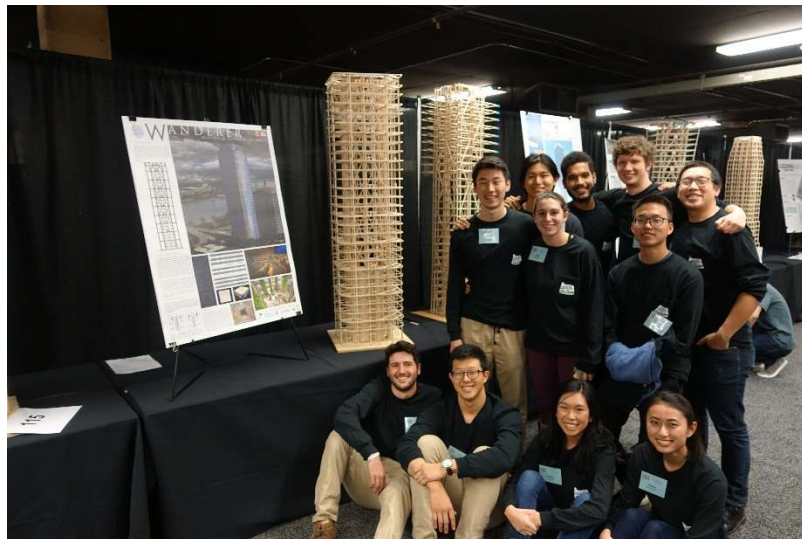


Figure 7: UCLA team with their structure during Shake Day

ELECTION & ELECTION RESULTS

An election for officers for the 2017-2018 academic year was held in May 2017. The table below shows the new officers appointed to the Chapter board who will take office on July 2017.

Role	Name	EERI Member Number	Email	Student Status
President	Eric Roberts	17797	eroberts22@ucla.edu	Undergraduate
Vice President	Jason Kim	18437	lukee3@g.ucla.edu	Undergraduate
Secretary	Stephan Ahn	18406	sahn1995@gmail.com	Undergraduate
Treasurer	Agam Tomar		agamtomar@ucla.edu	Graduate
Publicity Director & SDC Liaison	Bryan Hong	18438	bryanyh@ucla.edu	Undergraduate
Speaker Coordinator	Saman Abdulla		eng.saman86@gmail.com	Graduate
	Yi Tyan Tsai	16937	tsaiyityan@gmail.com	Graduate
SLC Representatives	Agam Tomar		agamtomar@ucla.edu	Graduate
	Yi Tyan Tsai	16937	tsaiyityan@gmail.com	Graduate

A list of the attachments is included below:

Henry Samueli School of
Engineering and Applied Science
Birthplace of the Internet

Civil and Environmental
Engineering
Engineering Sustainable Infrastructure for the Future

UCLA ENGINEERING


UCLA EERI Student Chapter

Infosession with Dr. Farzad Naeim

31st Jan | 6pm - 7pm | 67-124 Engineering IV

Dinner will be provided. Please RSVP as space is limited.

The UCLA EERI student chapter will be hosting Dr. Farzad Naeim as part of the Friedman Family Visiting Professionals Program. He will present on several iconic projects he has worked on from 6 - 7 pm on 31st January (Tuesday) at 67-124 Engineering IV (Faraday Room). Come and learn from the very best!



Dr. Farzad Naeim is the President of Farzad Naeim, Inc. and CEO of Mehrain Naeim International Inc. both of Irvine, California. He is also an Adjunct Professor at UCI and a faculty member at the European School for Advanced Studies in Reduction of Seismic Risk (ROSE).

Dr. Naeim received his Ph.D. in Civil Engineering in 1982 and his J.D. with highest honors in 2002. In 2007, he received the Fazlur Khan Medal for lifetime achievements in seismic design of tall buildings from the Council on Tall Buildings and Urban Habitat. He has served two terms (1995 and 2011) as the President of the Los Angeles Tall Buildings Structural Design Council. Dr. Naeim is a Past-President and an honorary member of the Earthquake Engineering Research Institute (EERI). He is currently the Chair of California's Strong Motion Instrumentation Advisory Committee and serves on the Seismic Advisory Board of Caltrans, Board of Expert Consultants of the Los Angeles Department of Water and Power (LADWP), and Advisory Council of the Southern California Earthquake Center (SCEC).

Dr. Naeim has published four textbooks, over 160 peer-reviewed papers, and has developed 45 different software systems for earthquake engineering design and education. Dr. Naeim has served as Technical Director for many landmark structures in California and across the United States and has collaborated with researchers from Stanford, UCB, UCLA, USC, UCSD, UCI and University of British Columbia on various research projects.

Performance Based Seismic Design of Tall Buildings

Farzad Naeim, PhD, SE, Esq
President, Farzad Naeim, Inc.
CEO, Mehraim Naeim International, Inc.
Adjunct Professor, University of California, Irvine



This presentation will provide an overview of current performance-based methodologies utilized for design of tall buildings in the United States.

The reasons why common prescriptive code provisions are incapable of addressing the needs of tall building design engineers are explained. The performance objectives commonly associated with tall building design are identified and the evolution of current component-based performance objectives to a more rigorous and fully probabilistic approach to performance based design is discussed.

Modeling and acceptance criteria associated with various performance based design guidelines are explained and special issues such as selection and scaling of ground motion records, soil-foundation-structure interaction issues, and seismic instrumentation and peer review needs are discussed.

Time: Jan 31st | 4 – 5:30 PM

Location: MS 5200

UNDERGRADS ARE WELCOMED TO COME



Anatomy of Three Award Winning Engineering Projects

Farzad Naeim, PhD, SE, Esq
President, Farzad Naeim, Inc.
CEO, Mehrain Naeim International, Inc.
Adjunct Professor, University of California, Irvine



This presentation will highlight the structural engineering challenges involved in design of three landmark projects:

1. The Walt Disney Concert Hall in Los Angeles, California;
2. Staples Center Arena in Los Angeles, California
3. The Eiffel Tower II in Las Vegas, Nevada

Each of these projects posed unique challenges to the engineering design team. From the very complex three-dimensional surfaces and geometry of the Disney Concert Hall, to the roof and support system of the Staples Center, to extreme weather engineering and construction methodology for the Eiffel Tower II. Despite the complexity of these projects, the competence of the design engineers and the team work spirit carried the day in each case resulting in internationally acclaimed projects.



Time: Jan 31st | 6 – 7 PM

Location: 67-124 Engineering IV

OPEN TO ALL STUDENTS