



Welcome Message from Convention Chair

President Hean-Teik Chuah (FEIAP) , Minister without Portfolio Chun-Yat Hsu (Executive Yuan) , President Marwan Abdelhamid (WFEO) , Immediate Past President Seng Chuan Tan (IES) , Chairman Sugk-Yong Yoon(FEIAP Committee) , Secretary General Jia-Yush Yen(I EET) , distinguished delegates from Asia and the Pacific region, honorable guests, ladies and gentlemen:

Good morning!

It is indeed a great pleasure to organize the prestigious Third Convention of the Federation of Engineering Institutions of Asia and the Pacific (FEIAP) . On behalf of the Organizing Committee and the President of the Chinese Institute of Engineers (CIE) , I would like to extend our warmest welcome to the FEIAP delegates to visit our country. I am equally grateful to our local participants for your enthusiastic participation in today's Convention. In particular, I would like to thank Minister Chun-Yat Hsu and Eng. Marwan Abdelhamid for your support and gracious presence today.

The FEIAP's assembly of professional engineering entities in Asia and the Pacific region has been instrumental in advancing the FEIAP's vision, mission and values while carrying out numerous types of activities, and thanks to the initiative of the Past President, Er. Tan Seng Chuan of the institution of engineers Singapore, we have now been holding an international FEIAP convention in conjunction with the General Assembly once every two years.

The first FEIAP Convention, which took place in Singapore in 2011, debuted with a theme of "Engineering Education and Accreditation", whereas the second convention, which took place in India in 2013, adopted a theme of "Engineering Initiatives for Sustainable Development: Integrating Innovation & Ethics", and now following in the great tradition and success that has been set forth by these previous conventions, we are very honor to have the opportunity to host the third convention in Taipei today.

This year's Convention, themed "Contributions of the Engineering Profession to Society and Civilization", will deal with the challenges, current practices and advancement in the engineering profession and its contributions to the society. The Convention also includes three subthemes of "Engineering Education", "Environmental Engineering", and "Natural Disaster Support Engineering", which are associated with the Standing Committees of FEIAP.

In the two-days program, we will have 4 keynote speakers and 27 paper presentations for the four sessions. Later on, President Hean-Teik Chuah and Secretary General Jia-Yush Yen will enlighten us with their keynote speeches. Tomorrow, Er. Tan Seng Chuan and Chairman Sugk-Yong will be our keynote speakers for the other two sessions. I am confident that the two-days program will provide invaluable resources of information for our brightest engineering minds to interact in technical exchanges, share personal experiences and network on related issues concerning Asia and the Pacific region.

Finally, I would like to thank all of you here today for your enthusiastic participation. I wish the Convention a grand success. Thank you!

Dr. John Chien-Chung Li
President
Chinese Institute of Engineers



Welcome Message from FEIAP President

I am very privileged and honoured to be able to put down a few words to this 3rd FEIAP Convention and 23rd General meeting 2015. Allow me to take this opportunity to express my heartfelt gratitude to the Organising Committee Members from Chinese Institute of Engineers (CIE) and Institute of Engineering Education Taiwan (IEET) for taking on such an onerous job.

This year's Convention, themed "*Contributions of the Engineering Profession to Society and Civilisation*" will deal with the challenges, current practices and advancement in the engineering profession and its contributions to the society. It will also be an avenue for discussion on modernisation taking into consideration living conditions, utilities, infrastructures touching on improved technology, techno-preneurship and also sustainability that the engineers have contributed and will continue to contribute to society at large. I was made to understand that this Convention will cover the pertinent topics as Safety of Operation; Risk Management; Risk Sharing; Development, Investigation & Instrumentation in society living; Health and environmental impact, mitigation of disasters and many others.

I believe that this event can be a high profile Convention that could provide a strategic networking platform for the region's research and development experts, top executives, senior managers from public and private sector related organizations, engineers, and academics and technopreneurs in the field of engineering.

I am sure that the Convention would be able to encourage interaction among entrepreneurs which could lead to opportunities of co-operation to develop global and regional strategic area in the scope of economy, technology and environment. With an exclusive panel of speakers from the various FEIAP economies, civil service organisations and the business community as well as international executives and authorities on engineering to share their views on general conditions, market trends and global perspectives of the sector, this Convention should greatly benefit the participants.

I am pleased to extend my warmest congratulation and appreciation to the speakers, paper presenters, sponsors, advertisers and exhibitors for their initiative, contribution and support to make this Convention an interesting and insightful event.

It is my sincere hope that this event will be a success and participants should make use of this opportunity to renew contacts, interact and exchange ideas and experiences for their personal development as well as for the progress of the nation.

I wish all parties and members of FEIAP member economies every success in your future endeavours!

Thank you.

Ir. Prof. Academician Dato' Dr. Hean Teik Chuah

President

(Sessions 2011/2013, 2013/2015)

The Federation of Engineering Institutions of Asia and the Pacific



Convention Main Theme: Contributions of the Engineering Profession to Society and Civilization

Few professions can claim greater contribution to civilization's progress than engineering. Everywhere we look, we see the tremendous advances created by engineers that benefit billions.

To name a few :

Modern construction provides shelter for people to live well in, while water supply and sanitary systems give us the fresh water and sanitation that ensure living standards and transportation systems provide essential infrastructure for people to go about their daily lives — and are all created by civil engineers.

Automobiles, ships, airplanes, and household appliances provide humanity with mobility and convenience, demonstrating the contributions of mechanical engineers to society. The power supply, televisions, computers, mobile phones and communication systems created by electrical engineers give people the power they need, the entertainment they want and the ability to live and work more productively, benefitting everyone.

Oil and gas, and the petrochemical products derived from them, provide not only the energy that drives society but many other essential components, including advanced fabrics for greater protection and comfort, and are all just a few examples of the great advances generated by chemical engineers.

And the list goes on.

So why aren't engineers held in higher esteem, considering their inordinate contributions compared to other disciplines?

Perhaps the answer lies in society's ambivalence towards technology in general : in today's society, the term "technology" often has negative overtones. For example, even the most insignificant negative impacts generated as side effects of technological advances are hyped by anti-technology naysayers who take technology's benefits for granted as they advocate "sustainability" and a "return to nature." They forget that without today's advanced technology, modern society could not survive and civilization would collapse.

It is time for engineers to speak out. We need to educate the general public to take a balanced view of technology's place in modern society. An honest and objective look will allow people to realize how important technology is and how much engineers have contributed to society.

We welcome papers related to three FEIAP Committees : Engineering Education, Environmental Engineering and Natural Disaster Support Engineering. Other papers related to the main theme are also encouraged.

Let's speak out!



Scientific Program

Each presentation lasts 20 minutes, including 3 minutes discussion.

Sunday, July 5, 2015

Venue: 2F Convention Hall

08:30-09:00	Registration
09:00-09:10	Opening Show
09:10-09:15	Opening Remarks Dr. John Chien-Chung Li, President, Chinese Institute of Engineers (CIE)
09:15-09:20	Welcome Remarks Ir. Prof. Hean-Teik Chuah, President, Federation of Engineering Institutions of Asia and the Pacific (FEIAP)
09:20-09:25	Welcome Remarks Mr. Chun-Yat Hsu, Minister without Portfolio & Chairperson of Public Construction Commission, Executive Yuan
09:25-09:30	Welcome Remarks Eng. Marwan Abdelhamid, President, World Federation of Engineering Organizations, (WFEO)
Session 1: Contribution of Engineering Profession to the Society and Civilization	
Moderator: Dr. Hsien-Heng Lee <i>Professor, Department of Civil and Construction Engineering, National Taiwan University of Science and Technology</i>	
09:30-10:00	Keynote Speech Science, Engineering, Technology & Innovation (SETI) Education for Economy Transformation Ir. Prof. Hean-Teik Chuah <i>President, FEIAP</i>
10:00-10:20	Paper Presentation To Bridge the Gap between Developed Countries and Developing Countries Dr. Xila Liu <i>Professor, Department of Civil Engineering, Shanghai JiaoTong University</i>
10:20-10:40	Tea Break
10:40-11:00	Paper Presentation Disaster Management – India’s Approach Mr. Ashok K. Basa <i>Immediate Past President, The Institution of Engineers (India)</i>
11:00-11:20	Paper Presentation The Design and Build of Disaster Prevention Parks Dr. Hung-Pin Huang <i>Professor, Department of Bioenvironmental Systems Engineering, National Taiwan University</i>



11:20-11:40	<p>Paper Presentation The Importance of Energy and the Challenge Ahead Mr. Lee-Cheng Chen <i>Chairman, GIBSIN Engineers, Ltd.</i></p>
11:40-12:00	<p>Paper Presentation Structural Robustness Design for Preventing Terrorist Attacks Dr. Xila Liu <i>Professor, Department of Civil Engineering, Shanghai JiaoTong University</i></p>
12:00-12:20	<p>Paper Presentation The Multi-Dimensional Aspects of Utilizing Water Sensitive Urban Design for Creating Water Sensitive Cities Mr. Paul L. Mitchell, FIEAust CPEng APECENG <i>Engineers Australia</i></p>
12:20-13:30	Lunch
Session 2: Engineering Education	
Moderator: Dr. Liang-Jenq Leu <i>Professor and Chairman, Department of Civil Engineering, National Taiwan University</i>	
13:30-14:00	<p>Keynote Speech International Engineering Education Accreditation & the IEET Experience Dr. Jia-Yush Yen <i>Secretary General, Institute of Engineering Education Taiwan (IEET)</i></p>
14:00-14:20	<p>Paper Presentation Globalization and Civil Engineering Education in Taiwan Mr. Bin-Chen Benson Hsiung <i>Business Manager, CECI Engineering Consultants, Inc., Taiwan (CECI)</i></p>
14:20-14:40	<p>Paper Presentation Systemic Approaches to Improving Engineering Education in Australia Dr. Prue Howard <i>Senior Lecturer, Central Queensland University</i></p>
14:40-15:00	<p>Paper Presentation Engineering Programme Accreditation for International Mobility: The Malaysia Experience in Mentoring Process Dr. CheeFai Tan <i>Senior Lecturer, Faculty of Mechanical Engineering, Universiti Teknikal Malaysia</i></p>
15:00-15:20	<p>Paper Presentation Engineering Education Accreditation in Myanmar Dr. Charlie Than <i>Vice President, Myanmar Engineering Society</i></p>
15:20-15:40	Tea Break



15:40-16:00	Paper Presentation The Importance of Engineers' Participation in Economic Growth of Myanmar Ms. Cho Zin Myint <i>Researcher, Curtin University</i>
16:00-16:20	Paper Presentation Implementing Failure Analysis for Engineering Project Based Learning (PBL) Dr. Wai Yie Leong <i>Ir. Associate Professor, The Institution of Engineers, Malaysia</i>
16:20-16:40	Paper Presentation Applying Capstone Course to Assess Graduate Attributes: A New IEET Accreditation Requirement Dr. Mandy Liu <i>Office Director & Deputy Executive Director of Accreditation Council, Institute of Engineering Education Taiwan (IEET)</i>
16:40-17:00	Paper Presentation Outcomes-based Accreditation : Contributing to the Alignment of Engineering Education for the Greater Benefit to Society Mrs. Lydia G. Tansinsin <i>Chairman, Accreditation & Certification Board for Engineering & Technology</i>
17:00	End of Program
18:00	Convention Banquet (Yuehsiang Hall, 2F, Howard Civil Service International House)
18:00-18:05	Welcome Remarks by Academician Dato Ir. Prof Dr. Hean Teik Chuah, FEIAP President
18:05-18:10	Welcome Remarks by Dr. John Chien-Chung Li, CIE President
18:10-18:15	Reading of Citation by Ir. Yean Chin Tan, FEIAP Secretary General
18:15-18:25	Presentation of the plaque and certificate to Prof. Cham Tao Soon by Academician Dato Ir. Prof Dr. Hean Teik Chuah, FEIAP President
18:25-18:35	Acceptance Speech delivered by Prof. Cham Tao Soon
18:35-18:45	WECC Introduction by Kazumasa Ito, WECC 2015 Committee
18:45	Dinner Banquet commence



Monday, July 6, 2015

Venue: 2F Convention Hall

08:30-09:00	Registration
Session 3 : Environmental Engineering	
Moderator : Dr. Shan-Hwei Ou <i>Professor Emeritus, National Cheng Kung University</i>	
09:00-09:30	Keynote Speech WFOE Model Code of Practice for Sustainable Development and Environmental Stewardship Er. Seng Chuan Tan <i>Past President, Institute of Engineers Singapore (IES)</i>
09:30-09:50	Paper Presentation Introduction of the Water Resource Management of Steelmakers Mr. Chan-Po Chen <i>Engineer, Environmental Protection Department, Dragon Steel Corporation</i>
09:50-10:10	Paper Presentation An Introduction to Management System of Carbon Emission from the Water Reservoirs in Taiwan Dr. Ching-Ping Chu <i>Deputy Manager & Division Head, Water Treatment and Reclamation, Environmental Engineering Research Center, Sinotech Engineering Consultants, Inc.</i>
10:10-10:30	Tea Break
10:30-10:50	Paper Presentation A Primary Survey on the Sewage Sludge Characteristics Related to Reuse in Taiwan Dr. Ching-Ping Chu <i>Deputy Manager & Division Head, Water Treatment and Reclamation, Environmental Engineering Research Center, Sinotech Engineering Consultants, Inc.</i>
10:50-11:10	Paper Presentation Reduction of Particular Matters Emitted from Quenching Tower in CSC Dr. Hsun-Yu Lin <i>Scientist, China Steel Corporation</i>
11:10-11:30	Paper Presentation Centre for Pavement Excellence Asia Pacific Mr. Brian O'Donnell, FIE Aust. FIPWEA, FCIWM UK., APEC Engineer, CPEng <i>Managing Director, Norwood Hall Asia Pty Ltd. Melbourne Australia</i>
11:30-13:30	Lunch
Session 4: Natural Disaster Support Engineering	
Moderator: Dr. Shun-Min Lee <i>Associate Vice President, Business & Research Department, CECI Engineering Consultants., Inc., Taiwan</i>	



13:30-14:00	Keynote Speech Natural Disaster Support Engineering Dr. Sugk-Yong Yoon <i>Chairman, Standing Committee on Natural Disaster Support, FEIAP</i>
14:00-14:20	Paper Presentation The Effect of Cumulative Horizontal Seismic Acceleration on Landslide Susceptibility with Logistic Regression Model Mr. Po-Wei Lin <i>Specialist, Geotechnical Engineering Office, Public Works Department, Taipei City Government</i>
14:20-14:40	Paper Presentation Education for Disaster Prevention and Mitigation against Magnifying Natural Disaster Mr. Mamoru Omoto <i>Committee Chair, Disaster Management, The Institution of Professional Engineers Japan (IPEJ)</i>
14:40-15:00	Paper Presentation Building an Impact Scenario Assessment Platform for Earthquake Disaster Management Support Dr. Chung-Sheng Lee <i>Senior Assistant Researcher, Earthquake and Manmade Disaster Reduction Division, National Science and Technology Center for Disaster Reduction</i>
15:00-15:20	Tea Break
15:20-15:40	Paper Presentation Natural Disaster Risk Management and Resilience – Systematic Methods, Tools and Technology Dr. Marlene Kanga AM Hon. FIEAust Hon. FIChemE FTSE <i>National President 2013, Engineers Australia</i>
15:40-16:00	Paper Presentation The Application of the Steel Sediment Control Facilities Mr. Tsung-Wei Hsieh <i>Assistant Engineer, Sinotech Engineering LTD.</i>
16:00-16:20	Paper Presentation Earthquake Resistance School Building Using Peninsular Malaysia Bedrock Response Spectrum Mr. Choo Kok Wah <i>Researcher and Engineer, Public Works Department, Universiti Teknologi Malaysia</i>
16:20-16:40	Paper Presentation Improvement of Rainfall Thresholds for a Flood Warning System in Taiwan – a Case Study of Xinzhuang Rain Gauge Mr. Hao-Yu Liao <i>Graduate student, Department of Bioenvironmental Systems Engineering, National Taiwan University</i>



16:40-17:00	<p>Paper Presentation</p> <p>Integration of Disaster Risk Reduction (DRR) into Water Sector</p> <p>Engr. Nasir Mahmud Khan</p> <p><i>Member, National Disaster Management Authority (NDMA) of Pakistan</i></p>
17:00	End of Program

Tuesday, July 7, 2015

Venue: Room 203

08:30	The 23rd FEIAP General Assembly Meeting
08:30-09:30	Standing Committee on Environmental Engineering meeting
09:30-10:30	Standing Committee on Engineering Education meeting
10:30-11:00	Morning Tea
11:00-12:00	Standing Committee on Information and Communication Technology meeting
12:00-13:00	Standing Committee on Natural Disaster and Preparedness meeting
13:00-14:00	Lunch
14:00-15:30	The 23 rd FEIAP General Assembly



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President, Chinese Institute of Engineers (CIE)

Co-Chairman

Dr. Tsong-Ming Lin

President, Institute of Engineering Education Taiwan (IEET)

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Dr. Hsien-Heng Lee

Professor, Department of Civil and Construction Engineering, National Taiwan University of Science and Technology

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