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## **NEW YEAR MESSAGE FROM CEE HEAD**

1 January 2016

Dear CEE Colleagues, students, alumni and partners,

As we glanced back at the year of SG50, NUS110 and FoE60, the Department of Civil and Environmental Engineering has generally gone through a good year. The quality of our students intake is getting better, more of our staff are selectively adapting to technology-enhanced mode of teaching, we continue to receive a good share of research grants and scholarships, our international standing has inched forward, and everyone is working towards greater collegiality and sense of belonging. All these are manifestations of the effort, contributions and support from all of you. On behalf of NUS, I convey my sincere gratitude.

As 2016 begins today, let us resolve to make this year a joyful and fruitful one. We have to accept that the ride is not always smooth but with the right mind-set, we can make it comfortable and fulfilling. There are some thoughts that I would like to share for 2016.

NUS is pushing towards online delivery of content to facilitate higher degree of participation from students through flipped classroom mode of teaching. Both staff and students need to adjust to this new mode of teaching. In addition, continuing and professional education is another area which we cannot afford to neglect and plans are underway to mount programmes in line with our government's vision. Working with the industry to make sure that we train future ready students is another direction we will continue to pursue. Our department is working with our industrial partners not only to secure industrial training placements for our undergraduates, but we also deliberate on how we can co-train to make the most out of their attachments.

On the research front, the department will continue to compete for grants and focus on issues related to sustainability, with focus on optimizing land-use, creating underground space, solving the first-mile last-mile transportation issue, working towards self-sufficient water supply, air pollution and waste utilization issues. Offshore and marine technology-related research has been an impactful area which the university as well as our industrial partners have committed considerable resources. We will capitalize on our recent achievements to create greater impact and translate research findings into practice.

With NUS pushing towards shared services to ensure that resources are optimally utilized, our department has to examine our mode of operation and make the necessary adaptations. Some re-alignment of job scope of our support and laboratory staff is inevitable and we will do whatever is needed when the situation becomes clearer. The department will continue our effort to reach out to students, alumni and partners to see how we can better fulfill our mission together and ensure that the CEE family spirit continues to be progressive.

May I wish you a Healthy and Fruitful 2016.

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## Department matters

### Promotion

Congratulations to **Associate Professor Meng Qiang** and **Associate Professor David Chua Kim Huat** on their promotion to full professorship effective January 2016.

### Retirement

**Mr Choo Ah Sway @ Choo Peng Kin**, Laboratory Technologist and **Mr Lim Huay Bak**, Laboratory Technologist have retired from the Department from 1 Dec 2015. Mr Lim has spent 49 years with the university. We thank them for their dedication and long years of service to the department.

### Resignation

**Dr Shen Ruifu**, Professional Officer left the employment of NUS on 3 Sep 2015.

### Appointment

**Prof Lee Der-Horng** has been appointed as Director of the NUS-LTA Transport Research Centre in Nov 2015. NUS'centre will focus on mobility behaviour, green mobility, transport network optimisation and structural engineering".

**Dr Moon Juhyuk** will be joining us on 4 Jan 2016 as an Assistant Professor. Dr. Moon earned PhD degree in Structural Materials at University of California, Berkeley and MS degree in Structural Engineering at Seoul National University. He was an assistant professor at Stony Brook University (SUNY) from 2013 to 2015. At Stony Brook University, he worked to develop sustainable infrastructure materials by up-cycling of industrial by-products of sulfur and fly ash. He also developed novel cementitious admixtures to reduce carbon footprint and enhance engineering properties of cement and concrete. In the U.S., his research was supported by NSF, NYDOT, KAITA, and industrial cement admixture company of PENETRON International Ltd. Along with the sustainable material development, his research interests also include multi-scale characterization by means of synchrotron radiation facility and novel simulation techniques to understand material behaviors at molecular level.

## Achievements and Recognition

### Faculty and Research Staff

#### Awards

The following faculty members were honoured at the Awards & Recognition Ceremony 2015:

- **Prof Chow Yean Khow** - Engineering Research Leadership Award 2015
- **A/Prof Meng Qiang** – Dean's Chair

**Prof Koh Chan Ghee** and **Dr Bai Wei** whose project entitled "Extreme Wave Impact on Floating Structures: A Novel Particle Method with Experimental Validation" has been awarded the "Top Projects of the SMI Research Showcase 2015" by the Singapore Maritime Institute (SMI) on 22 Oct 2015. There are 3 projects awarded this year. In addition, both have generously decided to donate the award prize of \$3,000 to build up our CEE Bursary fund for needy CEE students.

**Prof Yong Kwet Yew** has received the MND Dedicated Service Award 2015 given by the Minister of National Development on 20 Nov 2015. The award is given for 15 years of service and commitment in his capacity as Chairman, Accredited Checkers (AC) and Specialist Checkers (AC-Geo) Selection Panel.

**Prof Choo Yoo Sang** has received an appreciation certification plaque from Singapore Structural Steel Society on 16 Dec 2015 in appreciation for his dedication and support towards the society for more than 25 years.

**A/Prof Rajasekhar Balasubramanian's** research project on "Carbon Capture Using Innovative Adsorbents" has been recognized in terms of its quality, innovation and practical relevance with two IChemE (Institution of Chemical Engineers) awards: The Research Project of the Year Award (sponsored by Johnson Matthey) and Sustainable Technology Award (sponsored by GSK). He received these awards at the IChemE Singapore Awards 2015 ceremony held at the Shangri-La Hotel on 22 October 2015. The IChemE (Singapore) has nominated him for the Global Award.

**Dr Darren Chian Siau Chen** has won the MIT TR35 Asia. He receives the award for his research on earthquake engineering, particularly in catastrophe modelling and lifeline infrastructure damage mitigation."

**Dr Lim Fang Yee**, Research Fellow under A/Prof Hu Jiangyong's supervision has been awarded Session Best Paper "Evaluation of Bioretention Tree for Treatment of Stormwater Runoff" at the 2015 International Conference on Biological and Environmental Science (BIOES-15) held from 1 to 3 Oct 2015, Thailand.

**Mdm Lynn Wong Siau Lin**, Management Assistant Officer has been selected as one of the NUS Quality Service Award Winners 2015 for the Service Advocate award.

#### **Plenary/Keynote/Invited Lectures**

**Distinguished Prof Phoon Kok Kwang** delivered the 4th Wilson Tang Lecture at the 5th International Symposium on Geotechnical Safety and Risk (ISGSR2015), held between 13 and 16 Oct 2015, Rotterdam, Netherlands. Prof Phoon was invited to present this prestigious lecture "in recognition of his distinguished contributions to geotechnical probabilistic methods and reliability analysis, in particular for his original developments in reliability-based design, characterization of geotechnical uncertainty and outstanding services to the community".

**Prof Richard Liew** has delivered keynote lectures on the following conferences:

- Steel-concrete-steel sandwich composite structures – The current state of the art", keynote lecture presented at 11<sup>th</sup> International Conference on Advances in Steel and Concrete Composite Structures Tsinghua University, Beijing, China, 3 – 5 Dec 2015.
- "Singapore experience on prefabricated prefinished volumetric construction" lecture presented at the International Workshop on Industrialization of Construction, Shanghai, 20 Nov 2015.

**Prof Yong Kwet Yew** has received invitation to deliver the 26th Prof Chin Fung Kee Lecture 2016 by the Institution of Engineers, Malaysia.

**A/Prof Hu Jiangyong** was invited to talk on "Removal of PPCPs using AOP process: at the Plenary session for "The Global Commission on Health and Environmental Pollution" at The 16th International Conference of the Pacific Basin Consortium, Hosted by the University of Indonesia, City of Depok, West Java, Indonesia from 10 to 13 Aug 2015.

**A/Prof Hu Jiangyong, A/Prof Ng How Yong and Prof Ong Say Leong** are members of the international technical committee of the The 6th International Water Association's ASPIRE Conference & Exhibition organised by International Water Association (IWA) and Research Center for Eco-Environmental Sciences (RCEES), Chinese Academy of Sciences in Beijing, China from 20 to 24 Sep 2015.

**A/Prof Hu Jianguong** was invited to talk on “PPCPs removal by bioretention system” at Advanced Water Management Workshop in International Environmental Engineering Conference (IEEC2015) Conference from 28 to 30 Oct. 2015, Pusan, Korea.

**A/Prof Pang Sze Dai** was invited to talk on the use of graphene products in building materials at GrapChina 2015 from 28 - 30 Oct 2015, Qingdao, China..

**A/Prof Hu Jianguong** has delivered keynote lectures on the following conferences:

- “Advanced oxidation processes for organics decomposition and microorganism inactivation”, keynote speech presented at International Water Association International Conference on Sustainable Water Management, 29 Nov.- 3 Dec. 2015, Perth, Australia
- “Chemical indicators for sewage contamination”, keynote speech presented at International Water Associate 9<sup>th</sup> Specialist Conference on Assessment and Control of Micropollutants and Hazardous Substances in Water-Micropol and Ecohazard Conference, 22-26, Nov. 2015, Singapore
- “Advances in microbial contaminants disinfection for water treatment”, keynote speech presented at International Environmental Engineering Conference (IEEC2015) Conference, 28-30, Oct. 2015, Pusan, Korea
- “Photocatalytic processes for emerging contaminants decomposition”, keynote speech presented at 1<sup>st</sup> International Water Nexus Conference, 28-30, Oct. 2015, Daegu, Korea

**Dr Ong Ghim Ping, Raymond** was invited as one of the plenary speakers for the 9th World Ocean Forum in Busan, Republic of Korea during 20 - 22 Oct 2015 to share his research on value creation of port infrastructures in Singapore (such as our megaport in Tuas) and strategies in Asia and for other parts of the world. This is one outcome of his research efforts in multimodal transportation and international transportation.

### **Professional Recognitions**

**Prof Choo Yoo Sang** has been invited to be a member of the International Scientific Committee for the 8th International Conference on Steel and Aluminium Structures (ICSAS 2016), Hong Kong from 7 to 9 Dec 2016. The ICSAS 2016 conference ([www.civil.hku.hk/ICSAS2016/](http://www.civil.hku.hk/ICSAS2016/)) is organised by the Department of Civil Engineering, The University of Hong Kong.

**A/Prof Pang Sze Dai** has been invited to be a member of the Scientific Committee for the International Conference on Structural Engineering, New Technology and Methods (ICSENM'16), Prague, Czech Republic, 30 to 31 Mar 2016.

**Prof Quek Ser Tong** was member of the International Advisory Committee for the International Symposium on Reliability of Engineering Systems (SRES2015), Hangzhou, China, 15 to 17 October 2015.

**Prof Quek Ser Tong** was member of the International Scientific Committee for the 4<sup>th</sup> International Conference on Protective of Structures, Beijing, China, 18 to 21 October 2015.

**Prof Quek Ser Tong** was member of the International Advisory Committee for the 4th International Workshop on Design in Civil and Environmental Engineering (DCEE4), National Taiwan University, Taipei, Taiwan, 20 to 21 October 2015.

**Prof Quek Ser Tong** has been invited to be a member of the Scientific Committee for the 12<sup>th</sup> International Conference on Structural Safety and Reliability (ICOSSAR 2017), Technical University of Wien, Vienna, Austria, 6 to 10 August 2017.

**Prof Richard Liew** has been nominated as a member of the inaugural HDB Civil & Structural Engineering (CSE) advisory panel in Dec 2015. The objective is to apply fresh design ideas

and concepts to provide a complete live-work-play-learn environment for residents of Singapore. The panel will help bring new ideas to promote and instill excellence in HDB CSE design and projects. The panel will meet for two sessions a year from 2016 onwards.

**Prof Choo Yoo Sang** and **Prof Chan Eng Soon** are members of the international technical committee of the International Conference on Maritime Technology (ICMT 2016) organised by Harbin Engineering University (HEU) and University of Strathclyde (SU), Glasgow in Harbin, China 16 to 18 Jul 2016.

**Prof Richard Liew** has been re-appointed as a member of the BCA construction Excellence Awards assessment committee in Sep 2015. He is a member of the judging panel to evaluate and award winning projects and to review the award criteria and assessment guidelines for the years 2014, 2015 and 2016.

**A/Prof Pang Sze Dai** has succeeded Prof Quek Ser Tong as NUS Coordinator for the KKHTCNN Series of Symposium on Civil Engineering with effect from 18 November 2015.

### Students

#### Awards

Best Tutor Awards for AY 2014/15 were given to 5 tutors to commend their contributions during CEE Day event.

- **Nishtha Manocha - CE2134 – Hydraulics**
- **Teo Hui Juen - CE2112 – Soil Mechanics**
- **Zhang Jin - CE3166 – Structural Steel Design and System**
- **Wang Chenghong - ESE3101 – Solid & Hazardous Waste Mgmt**
- **Tan Yi Chao - ESE2401 – Water Science & Technology**

PhD student **Wang Yadong** under A/Prof Meng Qiang's supervision was awarded first prize at the Student Paper Competition in the 2015 International Conference on Logistics and Maritime Systems held in Hong Kong on 27 - 29 Aug 2015. The conference attracted more than 110 participants with around 80 papers presented.

PhD student **Chua Yiesue** under the supervision of Prof Quek Ser Tong, A/Prof Pang Sze Dai and Dr Elliot Law was awarded one of the Best Presenter Award at the 28th KKHTCNN Symposium on Civil Engineering held Chulalongkorn University on 16 - 18 Nov 2015. The conference attracted more than 200 participants with around 190 papers presented.

Former PhD Student **Yu Yang** has received the American Institute of Chemical Engineers (AIChE) Separations Division Graduate Student Research Award on 9 Nov in Salt Lake City, USA.

Former PhD Student **Yu Yang** under A/Prof Paul Chen's supervision has been selected by the Board of Graduate Studies for a President's Graduate Fellowship (PGF) tenable from 3 Aug 2015 to 13 Jan 2017. This is awarded to PhD candidates who show exceptional promise or accomplishment in research on the basis of competition among eligible candidates.

PhD Student **Li Si** under A/Prof Hu Jiangyong's supervision has been selected by the Board of Graduate Studies for a President's Graduate Fellowship (PGF). This award from 11 Jan 2015 to 05 Aug 2016 is given to PhD candidates who show exceptional promise or accomplishment in research.

CEE Design Teams took part in the Productivity Challenge 2015 organised by BCA during their annual Singapore Construction Productivity Week (SCPW) from 13-16 Oct 2015 at the Singapore Expo. Four teams were shortlisted for the second round of judging and they clinched the following places: Winners, 1st runner up, 4th and 5th prizes.

Position	Team Members
Champion	Abraham Goh Jun Yang, Boay Chong Zheng, Justin Tan Yong Li, Kee Kia Weng and Vanessa Koh Sok Ju
2 <sup>nd</sup> Place	Albin Ng Xiang Wen, How Bo Jun, Koh Tong Jie, Dang Dinh Hung and Chong Yee Kiat
4 <sup>th</sup> Place	Yin Zili, Yuen Li Ting, Janette, Lin Rongrong , Tan Jui Tuan, Maria and Yeo Hui Jun Janice
5 <sup>th</sup> Place	Kiral Lin, Sheena Goh, Kenneth Chan and, Dong Xuejiao

**Lim Chong Tee**, Environmental Engineering Year 4 Student clinched the Shell LiveWIRE Award 2015, winning a prize of \$10,000. He was recognised for his efforts in setting up social enterprise WaterOAM with two NUS graduates. The start-up markets a portable water filtration system that Mr Lim had invented with his team, which filters dirty water through a membrane and turns it into potable water.

## Events

### Coming Events

- The Welcome Sessions for CEE M.Sc. will be held on 6 Jan 2016 while the for Ph.D. and M.Eng. will be held on 8 Jan 2016.
- Following the successful BCA Networking Session 2015 in Jan this year, the Department, Student Clubs from CEE and SDE are now working with BCA to have this annual event at EA Foyer on 29 Jan 2016 from 11am to 5 pm. BCA will be inviting 30 to 40 companies to take up a booth at the event to recruit our students for internship, scholarships and career opportunities.
- Dr Cheong Koon Hean, CEO(HDB) & Deputy Secretary(Special Duties), MND Housing & Development Board and also a member of our NUS Board of Trustees, will have a sharing session with our students on “Design and Technology Innovations for Better Living” on 29 Jan 2016.
- The annual B. Eng. (Environmental) Final Year Project Symposium will be held at EA Foyer on 18 Mar 2016. Students from Upper Secondary/Junior College and Polytechnic students will be invited to view the work of our final year students the same afternoon, and to interact with our students and faculty.
- The scheduled talk by Dr. Shahzad Nasim Group CEO of Meinhardt on 15 Jan 2016 has been postponed to Mar/Apr 2016.

### Past Events

- About 90 students turned up for the talk “Career Talk to CEE Students: Insiders' Advice for your future Development” organised by IES/IStructE Joint Committee on 18 Sep 2015. The speakers included ER Cong Zhengxia, Technical Manager with Woh Hup (Private) Limited, ER Mak Yew Cheong, Director (Programs) of PM Link Pte Ltd and ER Wijaya Wong, Senior Principal and Head of Indonesian Representative, Arup Singapore Pte Ltd. A/Prof Bala was present to play host at the event.
- CEE Retreat involving 65 participants from Academic, Executive & Professional, Non Academic groups was held on 23 Sep 2015 University Town Plaza. Follow up meetings

between facilitators were held to discuss the suggestions and comments raised by the participants at the session and the survey conducted at the end of the event.



- CEE Day sponsored by JTC Corporation and organised by both CE and ESE Student Clubs was held at LT6 on 9 Oct 2015.
- A joint event for CEE & ISE Students and Alumni was organised by both departments on 13 Oct 2015. The invited speaker Mr BH Tan, Leadership Consultant and President at Lead Associates spoke on "Successful Transition from University to a Professional Career: Navigating your Journey Wisely, Meaningfully and impactfully". Ms Crystal Lim Leahy, Director, Centre for Future-ready Graduates acted as the moderator at the Q & A session.
- NUS Faculty of Engineering 60th Anniversary Gala Dinner 2015 was held on 16 Oct 2015 Fri, Shangri-La Hotel and the following PhD Alumni were present at the dinner:

S/N	Alumni	Designation	Employer
1	Dr Wu, Hartono	Geotechnical Engineer	Jack Up and Geotechnical Engineering Group
2	Dr Low Siok Ling	Research Fellow	NUS
3	Dr Ellen Gan Cheng Ti	Geotechnical Engineering Manager	UTEC Survey Asia Pte Ltd
4	Dr Teh Kar Lu	Project Manager	Braemar Technical Services (Offshore)
5	Dr Ong Chee Wee, Victor	Managing Director	ONE SMART Engineering Pte Ltd
6	Dr Koh Lee Chew	Senior Manager	Ngee Ann Polytechnic

- A seminar on “Advantages of Direct Second Order Analysis for Designing Complex Structures” by Professor SL Chan, Hong Kong Polytechnic was held on 27 November 2015. Prof Richard Liew invited the speaker for the event.
- Geotechnical Night organized by the Geotechnical Graduate Committee on 2 December 2015 brought together 60 professors, research fellows, research students, research engineers and alumni from the NUS geotechnical community at the Waterway, Shaw Foundation House. The event was sponsored by GeoAlliance Consultants Pte Ltd and Bannen Engineering Works Pte Ltd.
- Six CEE faculty and seven Ph.D. students attended the 28th KKHTCNN Symposium of Civil Engineering from 16 to 18 November 2015, Bangkok, Thailand. The KKHTCNN Symposium on Civil Engineering is an academic cooperation among Korea Advanced Institute of Science and Technology (KAIST), Kyoto University (KU), Hong Kong University of Science and Technology (HKUST), Tongji University (TJU), Chulalongkorn



University (CU), National Taiwan University (NTU) and National University of Singapore (NUS).



### **Visits to CEE**

A team of academics from Norwegian University of Science and Technology, NTNU, visited NUS and met up with senior administration as well as Prof Quek Ser Tong, Prof Chow Year Khow, Prof Arthur Cheng and Prof Choo Yoo Sang on 8 Oct 2015.

Professor Benito Jose Marinas, Head, Department of Civil Environmental Engineering at University of Illinois at Urbana Champaign, USA, visited CEE Department on 2 Nov 2015.

Prof Quek Ser Tong, Prof Somsak Swaddiwudhipong and A/Prof Vladan Babovic met up with Prof Bert Geerken, Dean of Civil Engineering, Technical University of Delft on 2 Nov 2015.