

MESSAGE FROM CEE HEAD

8 December 2016

Dear CEE Colleagues, students, alumni and partners,

With the end of 2016 fast approaching, I would like to share some updates with you since the last message in July 2016.

I am pleased to announce that MOE has approved the launch of the Bachelor of Technology (B.Tech) (Civil Engineering) degree programme by NUS SCALE in January 2017. The department has also recently launched the following **Graduate Certificate Programmes** in the following areas:

1. **Geotechnical Engineering**
2. **Structural Design Technology**
3. **Construction Productivity Enhancement**

The objectives to launch these courses are threefold:

1. To serve the life-long learning needs of working graduates and engineers & to **upgrade** themselves without having to go overseas or give up their jobs. (Earn and Learn).
2. To provide **alternate avenue for engineers to be admitted and pursue a relevant M.Sc. Programme.**
3. To foster and deepen NUS engagement with industry.

Those interested in these programmes can obtain more details in <http://cee.nus.edu.sg/programmes/GradCert.html>.

Congratulations to our recent graduates who had their commencement ceremony held on 11 July 2016. We were privileged to have our CEE Alumni Dr Shahzad Nasim, Executive Chairman, Meinhardt Group International as our Guest Speaker for the memorable event.



We would also like to congratulate to our alumni **Er. Liew Mun Leong** (who is also holding the NUS Provost Chair Professorship) and **Er. Tan Ee Ping** (who is our Department Consultative Committee member) on being presented the Distinguished Professional Engineer Awards in recognition of their outstanding achievements in engineering, management, research and development, and entrepreneurship, as well as for their service to the profession at the Professional Engineers Board's (PEB) Day of Dedication 2016 held at the Sands Expo and Convention Centre on 5 November 2016. On the same day, many of our alumni were presented their Professional Engineer or Chartered Engineer certificates. Our congratulations, and thank you for contributing to the engineering profession.

We congratulate our colleagues who have been recognized for their valuable contributions. Among them are **Adjunct Associate Professor Tam Chat Tim** for his contributions as one of SAC/SPRING (Singapore Accreditation Council /SPRING Singapore) valued partners. **Professor Ong Say Leong** had his work recognised in the list of Top 50 Engineering Feats @ IES-SG50. He was also awarded the Public Service Star (BBM) for his contributions to Singapore towards ensuring that NEWater and Potable Water are of high quality. **Professor Yong Kwet Yew**, NUS Vice President (Campus Infrastructure) and a faculty member of the CEE, has been awarded the MND Medallion, which acknowledges individuals who have served and contributed significantly to the MND Family of agencies.

In addition to improving our curriculum and delivery in education, the department continues to be fully committed to performing high quality research. The department receives a total of \$9.5m funding from 17 research projects (July 2016 – to date) from the following funding agencies; Ministry of National Development (MND), Land Transport Authority (LTA), Ministry of Education (MOE), Public Utilities Board (PUB), Building & Construction Authority (BCA), JTC Corporation, Office of Naval Research (ONR) and Ministry of Home Affairs (MHA).

The department is currently preparing for the visit by the Engineering Accreditation Board (EAB) in 2017 and 2018 for the renewal of our B. Eng. (Civil) and B. Eng. (Environmental) degree programmes accreditation. The EAB adopts the set of Graduates Attributes (GAs) published by the Washington Accord as the basis of Student Learning Outcomes. These relates to the knowledge, skills and behavioural traits that the students acquired while progressing through our programmes. Our programmes must demonstrate that by the time of graduation, the students have attained the graduate attributes. The Washington Accord, signed in 1989, is an international agreement among bodies responsible for accrediting engineering degree programs. It recognizes the substantial equivalency of programs accredited by those bodies and recommends that graduates of programs accredited by any of the signatory bodies be recognized by the other bodies as having met the academic requirements for entry to the practice of engineering.

To assist us in our accreditation, we seek the help of our Civil Engineering and Environmental Engineering Graduates as well as Current Employers and Managers of our graduates to complete the following surveys using the following links:

NUS B. Eng. Civil Engineering EAB Alumni Feedback Survey 2016

<https://mysurvey.nus.edu.sg/EFM/se/543BE5C231E6EB0D>

NUS B. Eng. Environmental EAB Alumni Feedback Survey 2016

<https://mysurvey.nus.edu.sg/EFM/se/543BE5C225102B3F>

Employer/Manager Survey for B. Eng (Civil) & B. Eng (Environmental) Engineering Accreditation Board (EAB) Visits

<https://mysurvey.nus.edu.sg/EFM/se/543BE5C2414F4104>

Our undergraduate Year 3 students will be participating in the next batch of 24 weeks compulsory internship with companies in January 2017. We thank our industry partners for providing internship for our students and we hope the collaboration will result in more interaction and sharing leading to more research initiatives as well as insights into how our students curriculum and be fine-tuned to meet the industry manpower requirements. Do send us your feedback, suggestions, internship and career opportunities. You can find our updates on the department website and events calendar at <http://cee.nus.edu.sg>.

Before closing, I take this opportunity to wish everyone a Merry Christmas and a Happy New Year 2017.

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Department matters

Department matters - Appointment

Professor Quek Ser Tong has been appointed as Head of the Department of Civil and Environmental Engineering from 1 October 2016 to 30 June 2019.

Professor Choo Chiau Beng has been reappointed as, Provost's Chair, Department of Civil & Environmental Engineering from 1 July 2017 to 30 June 2020.

Professor Zhang Min-Hong has been reappointed as, Director, Centre for Protective Technology from 1 July 2016 to 30 June 2018.

Professor Lee Fook Hou has been reappointed as, Co-Chairman, Centre for Protective Technology from 1 July 2016 to 30 June 2018.

Associate Professor Qian Xudong has succeeded Professor Tan Kiang Hwee as Director, Centre for Advanced Materials and Structures (CAMS) with effect from 1 December 2016.

We welcome **Dr Lau Hon Chung, Professor (Practice)** who has joined us on 17 October 2016. Dr Lau has more than 35 years of experience in the upstream petroleum industry. After completing his PhD at Princeton University, Dr. Lau joined Shell Oil Company in Houston, Texas. Since then he has held positions of increasing responsibility in research and development, operations, project delivery, technical assurance, training, recruitment, technical leadership and project management. He has worked in USA, the Netherlands, Brunei and China on various onshore, shallow water and deep water oil and gas projects. Within Shell, Dr. Lau was recognized as a subject matter expert in chemical enhanced oil recovery (EOR), smart wells and sand control. He was the pioneer of Shell's horizontal open hole gravel packing process, a well completion technology used by Shell worldwide. His research interests are in the areas of coalbed methane, unconventional reservoirs, enhanced oil recovery, nanotechnology, smart wells and sand control.

A warm welcome also to **Dr Li Yunyue Elita** who has joined us on 26 July 2016 as an Assistant Professor. Dr. Li did her postdoctoral research at Massachusetts Institute of Technology, holding a joint position in the Earth Resources Laboratory and the Department of Mathematics. Dr. Li received her Ph.D. and M.S. degrees in Geophysics from Stanford University in 2014 and 2010, respectively and obtained her B.S. degree (Highest Honors) in Information and Computational Science from China University of Petroleum, Beijing in 2008. Dr Li's research interests lie in the interdisciplinary boundaries among geophysical inspections, geological investigations, rock physics experimentations, and mathematical inverse problems. Her research interests include, but not limited

to, seismic wave simulation, seismic inversion for structural imaging, subsurface characterization with deterministic and stochastic methods, data integration with multi-physical data, seismic monitoring for reservoir and civil purposes, and digital signal and image processing. Her work involves theoretical derivations, numerical simulations and field applications, all tied together for the purpose of integrated underground characterization.

Ms Yuniar Hasan, Management Assistant Officer has joined the department effective 22 September 2016 replacing **Mr Jason Chong** who has been transferred to SDE on 1 September 2016.

Department matters - Retirement

Mdm Oh Siew Choo, Operations Associate, Department of Civil and Environmental Engineering, who has been with the department for over 21 years has retired on 1 November 2016. We appreciate her dedication, loyal service and contributions to the University.



Department matters - Departure

Dr Bai Wei has resigned from NUS on 30 November 2016 to take up an academic appointment in the University of Manchester, UK. We thank him for his dedication and support that he has given to the department. Some of the positions he held at the department included Lab supervisor for Hydraulics Lab, Programme Manager for MSc (Offshore) among many other appointments. We wish him all the best.

Professor Wang Chien Ming will be leaving for a Chair Professorship at the University of Queensland on 31 December 2016. Professor Wang has held many senior management positions in the faculty. Some recent appointments include Director, FoE Engineering Science Program (ESP) and Director, Global Engineering Programme. We wish him all the best.

Mr Ishak Bin Abd Rahman, Laboratory Technologist, Department of Civil and Environmental Engineering passed away on 30 November 2016. Our heartfelt sympathies and deepest condolences to his family on their loss. Ishak joined NUS in Mar 1986 and has been a part of our CEE family for the last thirty years. At the Structures Laboratory he will be sadly missed for his expertise in welding and machining, and skills in steelworks and concreting. On behalf of our colleagues I would like to place on record our deep appreciation for his dedication, loyal service and contributions to the University.

Achievements and Recognition

Faculty and Research Staff - Awards

Professor Yong Kwet Yew, NUS Vice President (Campus Infrastructure) and a faculty member of the CEE, has been awarded the MND Medallion, which acknowledges individuals who have served and contributed significantly to the MND Family of agencies. For his distinguished service as Chairman of Accreditation Selection Panel, Professor Yong has received his Medallion from the Minister for National Development and Second Minister for Finance, Mr Lawrence Wong, at the MND Huddle 2016 on 10 November 2016.

Associate Professor Hu Jiangyong received International Green Apple Award for Environmental Best Practice 2016, November 2016 for her R&D effort in bioretention technology development.

Professor Ong Say Leong has been awarded the Public Service Star (BBM) for his contributions to Singapore towards ensuring that NEWater and Potable Water are of high quality. His interest in emerging contaminants has also helped PUB to better understand the precursors and regulatory health limits of the emerging contaminants. Professor Ong received his BBM insignia from the President of Singapore at the Investiture of The 2016 National Day Awards held on 6 November 2016.

Prof Leung Chun Fai has been presented the "IES Outstanding Volunteer Award 2016" in recognition of his dedication and contributions to The Institution of Engineers, Singapore in 2015/2016 by The Institution of Engineers, Singapore.

At the Institution of Chemical Engineers' (IChemE) awards dinner held on 21 October 2016, NUS Engineering researchers picked up awards in three categories, namely the Energy Award (Singapore), the Research Project of the Year Award (Singapore), and the Young Chemical Engineer in Research Award (Singapore). **Associate Professor Rajasekhar Balasubramanian**, won the Energy Award (Singapore) this year, from a shortlist of eight. The award, sponsored by IChemE's Energy Centre, recognised his project 'Resource recovery from wastes', a novel waste treatment technology that converts urban waste streams into biofuels and other useful products. This project was pursued in collaboration with the Iowa State University (USA).

Professor Choo Yoo Sang received the Best Paper Award from Ms Christine Low, Under Secretary for Environment, Environment Bureau of The Government of Hong Kong SAR at the Advanced Maritime Engineering Conference (AMEC) 2016 of Pan Asian Association of Maritime Engineering Societies (PAAMES) on 14th October 2016. Senior Research Fellow, Dr. Shen Wei and **Professor Choo Yoo Sang** authored the paper on "Stress Concentration Factors of Double Skin Grouted X-joints Subjected to Brace Tension". The paper presented research results from their on-going Joint Industry Project on Static and Fatigue Strengths of Grouted Joints to generate new knowledge for structural integrity management of aged offshore platforms.

The Society of Petroleum Engineers (SPE) recently honored **Professor Arthur C. Cheng** with the SPE Formation Evaluation Award at SPE's Annual Technical Conference and Exhibition held on 26 - 28 September in Dubai, UAE for his development of industry leading acoustic and seismic logging tools, and leading the formation of the National University of Singapore's Petroleum Engineering program.

Professor Fwa Tien Fang was presented the 2016 iSMARTi Achievement Award by the International Society of Maintenance and Rehabilitation of Transport Infrastructures on 28 July 2016, in recognition of his excellence in research in pavement management and performance evaluation, notably in functional and safety performance of pavements, and outstanding contributions to research and professional developments of pavement engineering internationally.

Deputy Prime Minister & Coordinating Minister for Economic and Social Policies, Mr Tharman Shanmugaranam's speech showcased **Adjunct Associate Professor Tam Chat Tim**'s contributions as one of SAC/SPRING (Singapore Accreditation Council /SPRING Singapore) valued partners at SPRING Singapore's 50th Quality & Standards Anniversary Gala Dinner held on 26 July 2016. In recognition of his contributions, Dr Tam (Department of Civil & Environmental Engineering) was presented with a plaque at the Gala Dinner.

Dr Lefebvre Olivier Patrick received the "Most Disruptive Technology" Award for developing the electro-Fenton technology, Hydro Pitch Day, 11 July 2016 during the Singapore International Water Week from 10 to 14 July 2016.

Professor Ong Say Leong and Associate Professor Karl Erik Birgersson (Department of Chemical & Biomolecular Engineering) had their works recognised in the list of Top 50 Engineering Feats @ IES-SG50. Professor Ong was part of the team that worked on NEWater, while Associate Professor Birgersson was part of the team that developed the AIR+ Smart Mask. The Institution of Engineers, Singapore (IES) launched the national competition Engineering Feats @ IES-SG50 in 2015 to recognise the top 50 engineering achievements across the various fields of engineering deemed to have made the greatest economic, infrastructural or societal impact to Singapore since 1965. The projects were recognised at the IES Golden Jubilee Dinner graced by Prime Minister Lee Hsien Loong on 1 July 2016.

Faculty and Research Staff - Plenary/Keynote/Invited Lectures

Professor Ong Say Leong was the keynote speaker on "Managing Limited Water Resources: Singapore Experience" at the 8th Jeju Water World Forum organized by Jeju Special Self-Governing Province Development Corporation and Jeju Special Self-Governing Provincial Government from 16-18 November 2016.

Professor Fwa Tien Fang delivered a keynote lecture on "Impacts of Pavement Characteristics on Wet-Weather Driving Safety" at the 10th Asia Pacific Conference on Transportation and the Environment (APTE) in conjunction with the 11th Malaysian Universities Transport Research Forum (MUTRF) on 8-10 November 2016, Petaling Jaya, hosted jointly by the Universiti Tunku Abdul Rahman and the Institute of Engineers Malaysia.

Associate Professor Vladan Babovic received an invitation from Beijing Forum Organizing Committee, to attend Beijing Forum 2016 and the panel session on "Ecological Security and Ecological Urbanism: International Experience and the China Experiment" from 4 - 6 November. The Beijing Forum is a prestigious academic forum with a global influence, co-sponsored by Peking University, the Beijing Municipal Commission of Education, and the Korea Foundation for Advanced Studies.

Dr Ong Ghim Ping Raymond was one of the panel members at the Land Public Transport Commission (SPAD) Land Public Transport (LPT) Symposium on 16 - 17 October 2016 to share his insight on the importance of LPT today and what is needed to ensure its sustainability in the future.

Associate Professor Rajasekhar Balasubramanian was invited by MEWR to make a presentation on "Transboundary Air Pollution in Southeast Asia" in the Scientific Meeting, organised by WHO and UNEP on 6 October 2016, prior to the Ministerial Regional in Manila, The Philippines on 8 October 2016.

Associate Professor Rajasekhar Balasubramanian was invited to present on "Transboundary Air Pollution in Southeast Asia" to the Pre-Forum Scientific Meeting on 6 October 2016 at the Fourth Ministerial Regional Forum jointly organised by the Department of Health (DOH) and the Department of Environment and Natural Resources (DENR) of the Philippines, in collaboration with the World

Health Organization (WHO) and the United Nations Environment Program (UNEP).

Professor Yong Kwet Yew delivered the memorial lecture on “Integrated Infrastructure Systems for Future-Ready Cities” at the 26th Prof Chin Fung Kee Lecture 2016 on 3 September 2016, hosted jointly by the Institution of Engineers, Malaysia and The Engineering Alumni Association of the University.

Professor Ng How Yong was invited to give a keynote lecture on "The opportunities and challenges of anaerobic membrane bioreactor for domestic and industrial wastewater treatment and reuse " at the 5th International Water Association Regional Conference on Membrane Technology, 22 – 24 August 2016 in Kunming, China.

Associate Professor Hu Jiangyong was invited to present her research on PPCPs removal by biochar at Biochar Workshop @ 15th International Conference on Sustainable Energy Technology 2016, July 2016 in Singapore.

Professor Fwa Tien Fang delivered a keynote lecture on “Evaluating Wet-Weather Driving Safety Risks of Pavement Ruts” at the 4th Chinese European Workshop (CEW) on Functional Pavement Design held 29 June to 1 July 2016, Delft, hosted by the Delft University of Technology, the Netherlands.

Faculty and Research Staff - Professional Recognitions

Professor Zhang Min-Hong has been invited to be a member of the Technical Committee for the Sixth International Workshop on Performance, Protection & Strengthening of Structures under Extreme Loading, Guangzhou, China, 11 - 12 December 2017.

Professor Choo Yoo Sang is a member of International Programme Committee for 16th International Symposium on Tubular Structures, to be held in Melbourne during 4-6 December 2017.

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

Associate Professor Rajasekhar Balasubramanian has recently been appointed the Editor-in-Chief for the International Journal of Environmental Pollution and Remediation in November 2016.

Associate Professor Hu Jiangyong was invited to be

- 1) Program committee member, 11th IWA water reclamation and reuse conference, July 2017, USA;
- 2) Technical Program Committee Member, International conference on Environmental Research and Public Health, October. 2016, China
- 3) Scientific Committee Member, International Conference on Air, Water and Soil Pollution and Treatment, Apr 2017, Spain.

Professor Leung Chun Fai was invited to serve on the International Scientific Advisory Committee of 8th International Conference on Offshore Site Investigation and Geotechnics: Smarter Solutions for Future Offshore Developments to be held in London from 12 to 14 September 2017.

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

Professors 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 July 2016.

Professor Yong Kwet Yew has been re-appointed Chairman/Member, Development Projects Advisory Panel, Ministry of Finance for period 1 July 2016 – 30 June 2018 and Technical Adviser to Public Service Dept, Prime Minister Office on Strategic Workforce Planning Exercise 2016.

Associate Professor He Jianzhong was interviewed at the World Economic Forum in Tianjin on 20 June 2016 and 22 June 2016 respectively for the following topics:

“10 interviews with inspiring female scientists” at <https://www.weforum.org/agenda/2016/06/xxxx-10-interviews-with-inspiring-female-scientists> and

“Toxic waste taints polar bears and human breast milk. Here's a solution” at <https://www.weforum.org/agenda/2016/06/g-a-industrial-chemicals-find-their-way-into-polar-bears-and-human-breast-milk-is-this-the-surprising-solution>

Non Academic Staff - Awards

Mdm Norela Bte Buang, Laboratory Technologist is one of the recipients of the National Day Awards 2016 - The Long Service Medal.

Students - Awards

Undergraduate Students

The third run of the **Productivity Challenge 2016** was organised by Building & Construction Authority (BCA), in conjunction with Singapore Construction Productivity Week (SCPW) 2016. CEE has sent a total of 5 teams, led by **Prof David Chua** and **Prof Tan Kiang Hwee**, for the challenge. The teams were guided by Mr Venkatesan Karthik during the modelling phase. After 6 weeks of continuous effort, NUS CEE department bagged 4 out of the 5 positions, including the first and second runner-up prizes on 20 October 2016.

Ruzanna Binte Alwi (EVE) and **Peng Le** (CVE) undergraduate students are recipients of FOE 30th Innovation & Research Award 2016. The annual Innovation & Research Award previously called the Faculty of Engineering FYP Innovation Award, was set up in 1987 to recognize and appreciate innovative talents for their project achievement.

The team with EVE students **Wong Xin Huei** and **Wee Yong Han Vincent** clinched the 1st runner up award during the “Students Build and Run Membrane Bioreactors to Clinch Sembcorp Water Technology Prize 2016” held on 8 July 2016.

A team of 3rd year design project DCP students including EVE student **Ruzanna Alwi** and ECE student Abonti Alam supervised by **Dr Kevin Kuang Sze Chiang** won the Merit Award Category of Faculty of Engineering the 30th Innovation and Research Award (2016) for their project entitled: “Tackling Open Defecation in Cambodia”.

Another team of Engineering students supervised by **Dr Kevin Kuang** won the 3rd Prize in a nation-wide Smart Cool Ideas for Better HDB Living Competition (2015/2016).

Design-Centric Programme (DCP) students Eugene Goh Cho Sheng (ME3 Student) and **Ruzanna Binte Alwi** (EVE4) supervised by **Associate Professor Rajasekhar Balasubramanian** were awarded \$10,000 for Innovation and Entrepreneurship Practicum Award administered by NUS Enterprise NUS to develop a low-cost, portable airborne particulate sensor in October 2016.

Postgraduate students

Jinsong HE, Ph. D. student supervised by **Associate Professor Paul Chen JP**, is a recipient of a 2016 AIChE Separations Division Dibakar Bhattacharya Graduate Student Research Award. The Professor Dibakar Bhattacharyya Graduate Student Research Award has been established to recognize outstanding graduate student research in the membranes area. The award will be presented at the Separations Division's Awards Dinner on 14 November 2016 at the Annual Meeting in San Francisco, USA.

Shamik Chowdhury, Ph. D. student, working under the supervision of **Associate Professor Rajasekhar Balasubramanian**, is among this year's Green Talents awardees and was chosen from 757 outstanding applications to be awarded for his research in sustainable development. The award is an initiative of the German Federal Ministry of Education and Research (BMBF), honouring 25 young researchers each year. Research focus: green synthesis of 2D graphene nanosheets and their self-assembly into advanced 3D macrostructures for sustainable urban development. The jury was impressed by Chowdhury's innovative, cross-disciplinary approach to advancing sustainability in urban cities. The jury valued how the 3D GMs can offer competent solutions to problems of societal concern. The award, whose patron is Minister Professor Johanna Wanka, honours 25 young researchers from around the world each year. The winners come from various scientific disciplines and are recognised for their outstanding achievements in making our societies more sustainable. The Green Talents are selected by a high-ranking jury of German experts and are granted unique access to the elite of the country's sustainability research field. <http://www.greentalents.de/shamik-chowdhury.php> October 2016

At the Institution of Chemical Engineers' (IChemE) awards dinner held on 21 October, the best Young Chemical Engineer in Research award went to **Jinsong He**, a PhD student with **Associate Professor Paul Chen**. Her research work focused on the development and applications of adsorption and membrane technologies for water treatment. She successfully developed a fullscale production system for metallic oxide nano-particles and two types of highly cost-effective membranes, for decontamination of toxic heavy metals from aqueous solutions.

"Bunkering Problem with Bunker Price Uncertainty" authored by PhD student **Wang Yadong** and **Professor Meng Qiang** won the OCDI Takeuchi Yoshio Logistics Award in the TLOG2016 on 7 – 9 September 2016.

Team NUS One comprising **Erick Yusuf Kencana** and **Zhang Zhishen** (PhD students under supervision of **Professor Leung Chun Fai** and **Professor Chow Yean Khaw**) and **Xu Yanrong** (visiting PhD student under supervision of **Professor Leung Chun Fai**) has won the first prize for graduate student competition in 2nd International Geotechnical Engineering Festival 2016 on 25-29th September, Bandung, Indonesia. The team received rewards of a trophy, 1000 USD and 10 g gold bar for competing in writing, poster and oral presentation with research titled "Comparison of Soil Resistance under Monotonic Pipe Penetration in Very Soft Clay".

Chen Yiwei, supervised by **Associate Professor Hu Jiangyong** won the Best Poster Presentation award for "Extracellular polymeric substances in ozone-biological aerated filter systems with anthracite and granular activated carbon as media" at the 25th KKNN Symposium on Environmental Engineering held on 7 - 9 July 2016.

He Miao, supervised by **Associate Professor Hu Jiangyong** won the Best Oral Presentation award for "Impact of hybrid system of ozone/ceramic membrane on NOM characteristics and DBP potential" at the 25th KKNN Symposium on Environmental Engineering held on 7 - 9 July 2016.

Quek Pei Jun supervised by **Professor Ng How Yong** won the Best Poster Presentation award for "Applicability of a Self-forming Dynamic Membrane for post-treatment of UASB effluents at reduced HRTs" at the 25th KKNN Symposium on Environmental Engineering held on 7 - 9 July 2016.

Xu Jian Xiong supervised by **Dr Lefebvre Olivier Patrick** received the Best Student Poster Award for "Electro-Fenton Combined with anodic oxidation for industrial water treatment and reuse", Water Convention, Singapore International Water Week 2016 on 10 – 14 July 2016.

Gu Xiaoqiong, supervised by **Associate Professor Karina Gin** received the Best Student Poster Award for "Molecular Assays For Targeting Viral Pathogens in Tropical Reservoirs And Catchments" at the SIWW (2016).

Li Si under **Associate Professor 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 2016 to 05 August 2016 is given to PhD candidates who show exceptional promise or accomplishment in research.

Alumni

Engineering Class of '76 40th Anniversary Reunion on 22 October 2016 is featured in The AlumNus October - December issue. Associate Professor Gary Ong, our Deputy Head (Administration), Emeritus Professor Lee Seng Lip and Emeritus Professor Cheong Hin Fatt were among the guests who attended the anniversary event.



Engineering Class of 1976 40th Anniversary Reunion Dinner on 22 October at NUS

The Engineering Gala Dinner took place at the Guild Hall, Kent Ridge Guild House on 2 September 2016. The invited Alumni members are Er Tan Seng Chuan, Clement Quek, Cuthbert Yeo, Lau Yong Feng, Lim Chong Tee, Muhammad Faizal bin Zulkefli, Tan Yun Hao, Too Jun Lin, Wendy Tu Wenting, Yeo Choon Lian, and Department Consultative Committee Members Er Lim Keng Kuok and Er Ong See Ho who is also our CVE alumni.



Our B.Eng. (Civil) 2007 graduate, **Ms Neo Lay Kiat**, Project Manager of Faithful + Gould, has won the Middle East (ME) Consultant's Rising Star Award at a ceremony in Ritz Carlton Hotel, Jumeirah Beach Residence, Dubai. She is recognised for her rapid progression, exemplary performance over the last year, and demonstrating an exceptional level of skill and vision having worked on the Jameira Bay-Bulgari Resort & Residences, Cifford chance and Roche diagnostics office fit-outs.

Past Events

Engagement with Industry - Public Talks

The event "**Reversible Buildings designed with BIM for Sustainable Cities**" on organised by Vinci Construction and CEE was held and 14 October 2016. The speakers were Mr Philippe Robart, VINCI Construction, France and Ahmad Tashrif, NUS CEE Research Engineer on "Drones for construction productivity". **Professor David Chua** hosted the event.

"**2016 NUS & Midas Technical Seminar in Singapore**" on 26 October 2016 was organized by Centre for Advanced Materials and Structures (CAMS-CEE-NUS) and MIDAS Singapore, hosted by **Professor Richard Liew**.

A "**Career Dialogue with PUB**" session was held on 6 September 2016 for Civil Engineering and Electrical Engineering Students.

Professor Choo Yoo Sang was the Chairman for the **3rd Marine Operations Specialty Symposium (MOSS 2016)** held on 20 – 21 September 2016 at Engineering Auditorium. The need for continuing the symposium is demonstrated by the variety of shallow and deep water operations and facility installation activities worldwide from offshore oil & gas and renewable industries, and R & D in universities and research institutes. The 55 participants were from Australia, Brazil, Canada, China, Malaysia, Netherlands, Norway, United Kingdom and Singapore.

GeoSS and SYGeoSS and the Department organised a **Geotechnical Engineering Career Prospects Talk** for CVE 3rd year, final year and post graduate students on 16 August 2016. The 4 key presenters were:

1. Er. Michelle Lew - Kiso Jiban (Consultant)
2. Er. Chandrasegaran Sundararaju - Bachy Soletanche (Contractor)
3. Er. Phua Hooi Leng - LTA (Developer/Authority)
4. Dr. Chian Siau Chen, Darren - NUS (CEE Faculty)

Engagement with Industry - Annual Alumni and Students Dialogue Session

The **Annual Alumni and Students Dialogue Session** was successfully held on 2 November 2016, attended by faculty, both undergraduate and postgraduate students and alumni. Some of the areas covered during the session included: Career shifts, Postgraduate Studies, P.E. and Chartered Engineer, Employment opportunities, preparation for employment, Work life as an Engineer, EAB visits, surveys etc.

We thank the following alumni who took time to be part of the panellist for the event and provided their valuable advice and experiences with the audience.

| Alumni | Job Title & Company |
|--|---|
| Mr Nicholas Lim Wei Kun (2005 CVE Graduate) | Careers Advisor, Centre for Future-ready Graduates, NUS |
| Ms Lim Chin Shyan (2011 CVE Graduate) | Executive Engineer, Surbana Jurong Consultant Pte. Ltd. |
| Mr Edd Hong Shuqi (2008 EVE Graduate) | Senior Manager, WSH Practices, Industry Practices, Sensing and Engagement Department, Workplace Safety and Health Council |
| Ms Wee Ming Hwee (2008 EVE Graduate) | Customer Contract Management Specialist, Field Service, GE Water |
| Mr Tan Yoong Heng (1997 CVE Graduate) | Principal, Transport & Resources, Arup |
| Mr Kwa Chin Soon (2010 CVE Graduate) | Senior Engineer, Foundation Engineering & Geological Department, Building and Construction Authority |



Seated front row Left to right: Nicholas, Chin Shyan, Edd, Ming Hwee, Yoong Heng and Chin Soon

Department Meetings, Briefings and Activities

CEE held two **Department meetings** this semester to date on 5 August and 7 November to update academic and Executive & Professional Staff on new guidelines, policies and urgent issues on administration, student, research and projects/outreach matters.

The second **Department Consultative Committee Meeting** attended by our Committee Members (<http://cee.nus.edu.sg/people/DCC.html>) from the Industry was held on 25 October 2016. The areas covered during the discussion included: Continuing Professional Education initiatives launched by CEE, attracting top students, Engineering Accreditation Board visit preparation and Research projects cum initiatives.

Briefings on IA and SEP: The 24 weeks internship (Industrial Attachment or IA) for engineering students admitted in AY2014 cohort and onwards will be rolled out in Jan 2017. Professor Richard Liew, Department IA Coordinator gave a briefing to the Year 2 students on the IA application process and requirements while Student Exchange Programme (SEP) coordinators A/Prof Harry Tan and Associate Professor Paul Chen gave a SEP briefing on 11 October 2016. Both set of slides have been uploaded at CEE website at <http://cee.nus.edu.sg/programmes/BEng.html>

The department held a **Curriculum Retreat** on 23 September 2017 during the recess week. Some of the items discussed included reflections and sharing on education trends including industrial engagement, new modules in Engineering Principles and Practice (EPP1 and EPP2), Engineering Accreditation Board Visit Requirements and Preparation etc.

CEE Safety and Health Day 2016 jointly organised by student clubs: CE Club and ESESC was successfully held on 16 September 2016. 105 staff and students participated in the event. Associate Professor Harry Tan and Dr Lefebvre Olivier Patrick gave interesting safety talks to the audience. Staff and students also interacted actively in the Safety Challenge comprising safety games and quizzes. The following awards were presented:

1) CEE Safety and Health Logo Design Competition

| | |
|-----------------------|-------------|
| 1st prize | Low Yu Ling |
| 2 nd prize | Yu Xinxing |
| 3 rd prize | Zhao Xinyue |

2) Safety Awards

| | |
|------------|----------------------------|
| Individual | Seow Soon Leong |
| Group | Hydraulics Engineering Lab |

3) Safety Challenge awards to 3 teams comprising staff and students.

The new **9th ESESC and 19th CE Club Committees** had a meeting with Head of Department Professor Quek Ser Tong and Club Advisors Dr Chew Soon Hoe, Dr Lefebvre Olivier Patrick, Associate Professor Karina Gin and Peggy Leong on 15 September 2016 to discuss on future plans and activities for the student community.

The first **Graduate Fair** organised by the Office of Graduate Studies took place on 16 September 2016 at the EA foyer. It was an opportunity for final year students from NUS and other local universities to learn more about graduate studies in Engineering & Research Scholarships available.

The Department participated in hosting "**MOE- NUS Amazing Lab Race**" for Pre University and High School students on 19 August 2016. 72 students comprising 15 teams participated in 6 stations,

among which CEE has two stations: Surface Water Quality and Filtration (Environmental Engineering, TLab) and Flow measurement (Civil Engineering, Hydraulics Lab). Associate Professor Hu Jiangyong gave an introduction of our undergraduate programmes during the debriefing session.

Ph.D./M.Eng and MSc Welcome Orientation Briefings were held on 4 August 2016 and a LaserQuest student Orientation game for all postgraduate students took place on 20 August 2016 while Freshmen Welcome for CVE & EVE Undergraduates was held on 26 July 2016.

29 CEE colleagues attended a **Terrarium workshop session** arranged by the department staff welfare committee on 3 August 2016 during the lunch break. It was a fun and interactive session to build stronger bonds between colleagues.

Student Events

The **CVE Grad Night @SAVEUR THE CATHAY** organised by the graduating students themselves took place on 11 July 2016.

CESE Camp 2016 - Fantasia 2016 from 7 to 10 July 2016 was organised by our student Clubs: CE Club and ESESC for the new students.



Four team of students taking **CE3101 Integrated Infrastructure Project** showcased their projects on "Bike Sharing Project in Jurong Lake District" on 28 October 2016. The panel of judges included Associate Professor Chin Hoong Chor, Dr Chew Soon Hoe and Adjunct Assistant Professor Dr Wang Zhaoxia.



With the support of industry partners, academic staff and student clubs, the students visited the following companies and the work sites to gain some practical knowledge:

| Company | Date of Visit | Location |
|--------------------------------|----------------------|--------------------------------------|
| HDB | 22 September 2016 | HDB Hub @ Toa Payoh & Pulau Tekong |
| Lum Chang Building Contractors | 14 September 2016 | Northpoint City |
| Samsung C&T Corporation | 9 September 2016 | Singapore's New State Courts Complex |
| GAMUDA | 25 July 2016 | Cochrane Station, Kuala Lumpur |
| LTA | 26 August 2016 | Grange Road |
| LTA | 22nd August 2016 | River Valley Green |

Professor Leung Chun Fai led a group of student participating in **Gravity Caisson Wharf Design Project** had a site visit at the Tuas Container Port Terminal Phase 1 construction site on 19 August 2016.

Dr Low Ying Min led a team of 3 CVE students to participate at the **9th IJCEC competition** held in Shanghai Jiaotong University from 10-14 July 2016.

Visits to CEE

Associate Professor Gary Ong hosted a team of 3 faculty members and 18 Master of Civil Engineering Students from **Diponegoro University, Indonesia** on 22 November 2016.

Associate Professor Rajasekhar Balasubramanian hosted a team of 14 faculty and students from **Notre Dame of Dadiangas University, Philippines** on 27 October 2016.

Associate Professor Harry Tan hosted a team of 27 faculty and students from the **University of Southern Denmark, Denmark** on 11 October 2016.

Associate Professor Gary Ong hosted the Dean and his 11 colleagues from Faculty of Engineering, **UNIKA Soegijapranata, Semarang Indonesia** on 6 October 2016.

Associate Professor Rajasekhar Balasubramanian hosted a team of 2 lecturers Dr Haryono S Huboyo and Arya Rexagama and 49 students from **Diponegoro University, Indonesia** on 6 September 2016.

Coming Events

The next **BCA - NUS Networking Event** jointly organised by BCA, CEE, Student Clubs from CEE and SDE will be held on 20 Jan Fri at EA Foyer. The event is for companies to meet students who are interested to take up scholarship, internship and career opportunities with them.

The **NUS Open Day** and **Engineering Open House 2017** are arranged on 11 Mar 2017 and 14 May 2017 respectively.

Publications

The third copy of “**The NUS Engineer**” published by the Faculty of Engineering is now available at <http://www.eng.nus.edu.sg/ero/publication.php?option=6> . This issue included the awards received by **Professor Philip Liu**, **Professor Ong Say Leong** and **Adjunct Associate Professor Tam Chat Tim** as well as MOU signing between NUS Engineering through its Centre for Offshore Research & Engineering (CORE) and the Korean Register of Shipping (KR) on 27 July 2016.

Our CEE Alumni, **Mr Sebastian Lee Tzyy Tong**, who had completed MSc. (Civil Engineering) in 2008 and B.Eng. (Civil) in 2003 and **Mr Huang Hongdou** who had graduated from B.Eng. (Environmental) in 2009 are featured in this issue.

Besides receiving updates at our CEE website at <http://cee.nus.edu.sg/> , you can also check our news at facebook page **NUS CEE - Civil & Environmental Engineering** or **@NUSCEE**.