

AEDS2018

DIVERSIFICATION OF ENGINEERING EDUCATION PROGRAMS
– TODAY AND FUTURE

MAY 21, MONDAY – MAY 23, WEDNESDAY, 2018
TOKYO INSTITUTE OF TECHNOLOGY, TOKYO, JAPAN

History of **ASIAN ENGINEERING DEANS' SUMMIT (AEDS)**

AEDS meetings have been held as

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| 2010 |  | National University of Singapore, Singapore |
| 2012 |  | Chinese University of Hong Kong, P.R. China |
| 2013 |  | Yonsei University, Korea |
| 2014 |  | Peking University, P.R. China |
| 2015 |  | National University of Singapore, Singapore |
| 2016 |  | Zhejiang University, P.R. China |
| 2017 |  | University of New South Wales, Australia |

Foreword



Yuji Wada



Tatsuya Okubo

It is a pleasure for us to welcome all of you to Ookayama campus of Tokyo Institute of Technology for the 8th Asian Engineering Deans' Summit. We are proud to be hosting the 2018 Summit meeting. This gathering of Deans of Engineering and representatives is an auspicious occasion to explore further improvements and potential collaborations in engineering education.

The AEDS was first held at National University of Singapore, Singapore in 2010 and has since been held at the Chinese University of Hong Kong, P. R. China (2012), Yonsei University, Korea (2013), Peking University, P. R. China (2014), National University of Singapore, Singapore (2015), Zhejiang University, P. R. China (2016) and University of New South Wales, Australia (2017).

As the perceived value of universities has undergone shifts according to changing social demands and the global environment, these external changes have spurred the production of a variety of new engineering education programs in addition to traditional discipline-based programs. As ever, engineering education is at the forefront of educational innovation with advances in artificial intelligence and educational technology.

At this year's Summit, we look forward to presentations related to the theme Diversification of Engineering Education Programs – Today and the Future. This theme covers a very wide spectrum of activities, including double degree programs, global education programs, student mobility programs and virtual exchanges, cross-cultural programs, educational technology, active learning, project- and problem-based learning, entrepreneurship programs, internship programs, research-based educational programs through industrial collaboration, and so on. We look forward to sharing best practices and future plans to further improve the quality of engineering education at each university and in the region as a whole.

Professor Mark Hoffman, the Dean of UNSW Engineering who hosted AEDS 2017, wrote in his Foreword to the AEDS 2017 booklet that “there is no doubt that the center of gravity for engineering is moving towards Asia.” We fully agree to this statement and sincerely hope that the ideas discussed in this AEDS 2018 will lead innovations in engineering education throughout the world. Asia's engineering deans will make the most of this opportunity to advance outstanding comprehensive programs in engineering education. We look forward to exchanging ideas with you and to enhancing the solid foundations of our collaboration.

Finally, we wish you an enjoyable stay in and around Tokyo.

Professor Yuji Wada*¹ and Professor Tatsuya Okubo*²

Chairpersons of the 2018 Asian Engineering Deans' Summit Organizing Committee

*1 Dean, School of Materials and Chemical Technology, Tokyo Institute of Technology

*2 Dean, School of Engineering, The University of Tokyo

Program

MAY 21, MONDAY

Venue: TTF 2F Meeting Room1
Venue: ROYAL BLUE HALL,
Tokyo Institute of Technology

15:30-17:30
17:00-18:00
18:00-20:00

AEDS Steering Committee Meeting
Registration
Welcome Reception

MAY 22, TUESDAY

Venue: Multi-Purpose Digital Hall

8:30- 9:00
9:00- 9:30

Registration
Opening Ceremony
<Welcome address>
• Prof. Yuji Wada, Dean, School of Materials and Chemical Technology, Tokyo Institute of Technology, Co-chair AEDS2018, Japan
• Dr. Kazuya Masu, President, Tokyo Institute of Technology, Japan
• Dr. Hans J. Hoyer, Executive Secretary, GEDC, USA
• Prof. Mark Hoffmann, UNSW, Chair of AEDS2017, Australia

9:30-10:10
10:10-12:00

Group Photo and Coffee break
Keynote Speeches
• Mr. Hiroki Matsuo, Deputy Director-General, Science and Technology Policy Bureau, Ministry of Education, Culture, Sports, Science and Technology, Japan
“Towards Next Generation, Towards Society5.5 - Improvement of Engineering Education of Japanese Universities”
• Prof. David Shallcross, University of Melbourne, Chair of Steering Committee, AOTULE, Australia
“Will Lectures Still Exist in 2025 ? ”
• Prof. Norimi Mizutani, Dean, Graduate School of Engineering, Nagoya University, President, Eight-University Engineering Association, Japan
“Tasks of Eight-University Engineering Association in Japan “

12:00-13:20
13:20-15:00

Lunch
Session 1: Double/Dual Degree Programs for Student Mobility
Session Co-chairs:
• Prof. Sunghyun Choi, Vice Dean, College of Engineering, Seoul National University, Korea
• Prof. Mark Hoffman, Dean, Faculty of Engineering, University of New South Wales, Australia
Speakers:
• Prof. Hong Yan, Dean, College of Science and Engineering, City University of Hong Kong, P.R. China
“Joint Bachelor’s Degree Program between City University of Hong Kong and Columbia University”
• Dr. Rupesh Vasani, Director, Gujarat Technological University, SAL EDUCATION CAMPUS, India
“Education Beyond The Borders-A case study of Gujarat Technological University, India“
• Prof. Masahiro Ohshima, Dean, Graduate School of Engineering, Kyoto University, Japan
“What Does Double Degree Program Mean to our own University’s Degree and Students?”
• Prof. Yoshimi Sonoda, Vice Dean, Department of Engineering, Kyushu University, Japan
“The Current Situation and Issues of Double Degree Program in Graduate School of Engineering”
• Prof. Saman Halgamuge, Director, Research School of Engineering, College of Engineering and Computer Science, Australian National University, Australia
“How Jointly Developed Degrees of Different Forms can help Internationalization of Universities?”

Program

| | | |
|---|----------------------------|---|
| | 15:00-15:20 15:20-17:00 | Coffee Break Session 2: International Internship Programs with Industrial Collaborative Research <i>Session Co-chairs:</i> <ul style="list-style-type: none">• Prof. Hong Yan, Dean, College of Science and Engineering, City University of Hong Kong, P. R. China• Prof. Natacha DePaola, Dean, Amour College of Engineering, Illinois Institute of Technology, USA <i>Speakers:</i> <ul style="list-style-type: none">• Prof. Chung-Che Chou, Associate Dean, College of Engineering, National Taiwan University, Taiwan “Collaboration Research at NTU: Example of Earthquake Engineering”• Prof. Manivannan Kaliappan, Dean, Mohamed Sathak AJ College of Engineering, India “Industry -Academia Collaboration in India-Initiatives, Issues, Opportunities and Strategies”• Prof. Hanxing Liu, Executive Dean, International School of Materials Science and Engineering, Wuhan University of Technology, P. R. China “Cultivation Reform for Top-notch Innovative Talents in Materials Science and Engineering”• Prof. Chang-Fa Yang, Dean, College of Electrical Engineering and Computer Science, National Taiwan University of Science and Technology, Taiwan “Taiwan Tech GLORIA and Case Studies” |
| Venue: Happa-en (Japanese garden and restaurant) | 17:00-17:30 17:50-19:50 | Move to Banquet Venue by Shuttle Bus Banquet |
| <u>MAY 23, WEDNSDAY</u> Venue: Multi-Purpose Digital Hall | 8:40- 9:00 9:00-10:40 | Morning Coffee Session 3: Recruitment of International Students and Female Students <i>Session Co-chairs:</i> <ul style="list-style-type: none">• Prof. Tim Cheng, Dean, School of Engineering, Hong Kong University of Science and Technology, P. R. China• Prof. David Shallcross, University of Melbourne, Chair of Steering Committee, AOTULE, Australia <i>Speakers:</i> <ul style="list-style-type: none">• Dr. B.R. Sarman, C.O.E., Indian Society for Technical Education(VP), KKH State Open University, India “Girls in Technical Education _ Indian Perspective”• Prof. Norihiro Nakai, Dean, School of Environment and Society, Tokyo Institute of Technology, Japan “How we attract international students at the undergraduate level: the challenge of the Global Scientists and Engineers Program at Tokyo Tech”• Prof. Haiyun Zhao, Associate Dean, The School of General Engineering, Beihang University, P. R. China “International Education at Beihang University”• Prof. Guohai Dong, Dean, Faculty of Infrastructure Engineering, Dalian University of Technology, P. R. China “Introduction of DUT’s China-Japan Double Campus Program”• Prof. T.S. Indumathi, Professor, Centre for Post Graduate Studies, Visvesvaraiiah Technological University, India “Status of International Students in India for Higher Education” |
| | 10:40-11:00 | Coffee Break |

Program

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|-------------|---|
| 11:00-12:40 | <p>Session 4: Entrepreneurship Programs for Innovative Human Resource</p> <p><i>Session Co-chairs:</i></p> <ul style="list-style-type: none">• Prof. Norman C Tien, Dean, Faculty of Engineering, University of Hong Kong, P. R. China• Prof. Yuji Wada, Dean, School of Materials and Chemical Technology, Tokyo Institute of Technology, Japan <p><i>Speakers:</i></p> <ul style="list-style-type: none">• Prof. Tim Cheng, Dean, School of Engineering, Hong Kong University of Science and Technology, P. R. China “HKUST’s Entrepreneurship Education and Dream Builder Programs”• Prof. Tetsuya Nagasaka, Dean, School of Engineering, Tohoku University, Japan “Earth on EDGE - An entrepreneur education program in Tohoku University”• Prof. Mark Hoffman, Dean, Faculty of Engineering, University of New South Wales, Australia “Fostering student entrepreneurship to create new technologies”• Prof. Kee Chaing Chua, Dean, Faculty of Engineering, National University of Singapore, Singapore “Entrepreneurship programs at the National University of Singapore”• Prof. Dai Senoo, Professor, School of Engineering, Tokyo Institute of Technology, Japan “CBEC : team-oriented Cross Border Entrepreneurship Cultivating program” |
| 12:40-13:40 | <p>Lunch (Buffet)</p> |
| 13:40-14:10 | <p>Keynote Speech</p> <ul style="list-style-type: none">• Dr. Naonori Kurokawa, The University of Tokyo Edge Capital, Japan “Building exceptional companies from science” |
| 14:10-15:50 | <p>Session 5: Good Practices for Diversification of Engineering Education Programs</p> <p><i>Session Co-chairs:</i></p> <ul style="list-style-type: none">• Prof. Kee Chaing Chua, Dean, Faculty of Engineering, National University of Singapore, Singapore• Prof. Tatsuya Okubo, Dean, School of Engineering, The University of Tokyo, Japan <p><i>Speakers:</i></p> <ul style="list-style-type: none">• Prof. Hiroshi Mitani, Dean, Graduate School of Frontier Sciences, The University of Tokyo, Japan “A Novel Education Program on Large Complex Socio-Technical Systems for Graduates and Professionals”• Prof. Komsan Maleesee, Dean, Faculty of Engineering, King Mongkut’s Institute of Technology Ladkrabang, Thailand “Implementation of Students Projects into Markets and Real Worlds”• Prof. Jhy-Chern Liu, Dean, College of Engineering, National Taiwan University of Science and Technology, Taiwan “New programs of engineering education at Taiwan Tech”• Prof. Abdul Aziz Abdul Raman, Dean, Faculty of Engineering, University of Malaya, Malaysia “Developing Research Culture Among Undergraduate Students Holistically”• Prof. Norman C Tien, Dean, Faculty of Engineering, University of Hong Kong, P. R. China “Interdisciplinarity within Engineering Curricula”• Prof. Yasushi Asami, Vice Dean, Graduate School of Engineering, The University of Tokyo, Japan “Education and International Programs in the School of Engineering, the University of Tokyo” |
| 15:50-16:00 | <p>Closing Remarks</p> <ul style="list-style-type: none">• Prof. Tatsuya Okubo, Dean, School of Engineering, The University of Tokyo, Co-chair AEDS2018, Japan• Speech of Acceptance, Host university of AEDS 2019 |

SPEAKERS



<Opening Ceremony>
Kazuya Masu
President,
Tokyo Institute of
Technology,
JAPAN

Kazuya Masu has served as the 22nd president of Tokyo Tech since April 1, 2018. His flexible, dialogue-based leadership has guided the Institute during a time of important transformation, uniting Tokyo Tech's diverse research centers, laboratories, and units into one integrated hub. Together with his profound understanding of Tokyo Tech, Masu's ability to inspire and manage change through collaborative teamwork continues to propel the Institute toward the achievement of a shared vision.

A specialist in electronic devices, integrated circuits, and wireless sensor networks, Masu earned his bachelor's, master's, and doctoral degrees in engineering from Tokyo Tech in 1977, 1979, and 1982 respectively. In April 1982, he took an assistant professor position at the Research Institute of Electrical Communication at Tohoku University, where he became associate professor in 1993. In June 2000, Masu returned to Tokyo Tech as professor at the Precision and Intelligence Laboratory. He subsequently held professorial positions at the Integrated Research Institute from 2005 to 2010, the Solutions Research Laboratory from 2010 to 2014, and the Frontier Research Center from 2014 to 2016. For the two years prior to his inauguration, Masu served as the first director-general of the Institute of Innovative Research.



<Opening Ceremony>
Hans J. Hoyer
Executive Secretary,
GEDC, USA

Dr. Hans Jürgen Hoyer serves as the Secretary General of the International Federation of Engineering Education Societies (IFEES) and Executive Secretary of the Global Engineering Deans Council (GEDC). He is also a Resident Scholar in Global Engineering at George Mason University, an Honorary Professor in Hungary, India, Kazakhstan, and Peru and strategic advisor to presidents of NMITe, UK and SUSTech, China.

He is a governing board member for the International Center for Engineering Education, which operates under the auspices of UNESCO, at Tsinghua University, and an advisory board member of UNESCO and the Indo-Universal Collaboration for Engineering Education, an organization he co-founded.

Dr. Hoyer has several decades of global experience holding executive leadership positions in global NGOs, an affiliate of the World Bank leading international development programs, fundraising, and shaping policies for global institutions and associations. Throughout his career, he has also been deeply engaged in education initiatives, including as a professor and dean at the School for International Training. Born in Berlin, Dr. Hoyer immigrated to the USA as a teenager and earned a Ph.D. at American University. He has lived in more than twenty countries, visited more than 148 countries, is fluent in four languages, and conversant in an additional five. He has written and published on a broad range of subjects, including engineering education.



<Opening Ceremony>&
<Session 4>
Mark Hoffmann
UNSW, Chair of
AEDS2017,
AUSTRALIA

Professor Mark Hoffman is Dean of Engineering at the University of New South Wales, Sydney Australia. Prior to his appointment in 2015 he was the University's Pro Vice-Chancellor (Research). He has also held positions of Associate Dean (Research) in the Faculty of Science and Head of its School for Materials Science and Engineering for five years. He holds a BE in Mechanical Engineering and PhD from Sydney University and a Masters of Business and Technology from UNSW. Throughout his career, Mark has maintained high levels of research productivity, leading a team of up to 40 researchers and has published over 200 research papers and graduated 28 PhD students. He is recognised as an international leader in the field of structural integrity of materials. He works closely with industry in areas which include aluminium foams, polymer nanocomposites, dental materials and is currently seeking lead-free alternative piezo ceramics. Commencing his engineering career as a cadet with the Electricity Commission of NSW, Mark's research and academic career has included two years at UC Berkeley and Tokyo Metropolitan University, time as a researcher in India and two stints in Germany as a Research Associate, and then Humboldt Fellow. His international reputation led him to his appointment as Director to the Board of the International Congress on Fracture, a premier international body for scientists and engineers involved with the mechanics and mechanisms of fracture,

fatigue and strength of materials. He has contributed to numerous international reviews and is currently a member of the Expert Commission of the German Science Foundation and Executive Committee Member of the Global Engineering Deans Council.

Mark was elected as a Fellow of the Australian Academy of Technological Sciences and Engineering in 2014 after becoming a Fellow of the Institute Engineers Australia in 2011. He also has a Carrick Citation for outstanding contributions to student learning and has received two Vice-Chancellor's Teaching Awards. At the University of Sydney, he was presented with the Phil Jones "all-round achievement" award and a Blue in Rowing.

SPEAKERS



<Keynote Speeches>

Hiroki Matsuo

Deputy Director-General,
Science and Technology Policy
Bureau, Ministry of Education,
Culture, Sports, Science and
Technology, JAPAN

Hiroki Matsuo has been the Deputy Director-General for Science and Technology Policy Bureau since January 2018. He served as Director, International Nuclear and Fusion Energy Affair Division, Research and Development Bureau, MEXT, 2007-2008
Director of Planning Office, Yokohama Branch, Riken 2008-2010
Director, Student Support and Exchange Division, Higher Education Bureau, MEXT, 2010-2013
Director, Knowledge Infrastructure Policy Division, Science and Technology Policy Bureau, MEXT, 2013-2014
Director, Minister's Secretariat, MEXT, 2014-2016
Deputy Director-General for Higher Education Bureau, MEXT, 2016 - 2018.



<Keynote Speeches>

David Shallcross

University of
Melbourne, Chair of
Steering Committee,
AOTULE, AUSTRALIA

Professor David Shallcross is currently the Associate Dean (Academic) and Director of the Engineering Learning Unit at the University of Melbourne. David served as Head of the Department of Chemical and Biomolecular Engineering at the University. David was also Vice President of the UK-based Institution of Chemical Engineers for 3 years and Editor-in-Chief of the Elsevier journal Education for Chemical Engineers for 9 years. David is also the Chair, of the Steering Committee for AOTULE, an international consortium of leading engineering institutions in the Asia-Oceania region. David has an international reputation in chemical engineering education and has won several national and international awards for his contributions to chemical engineering education including the 2006 Frank Morton Medal of the Institution of Chemical Engineers, a 2007 Carrick Citation from the Carrick Institute in Australia, the 2010 Caltex Teaching Award of Excellence and the 2013 Institution of Chemical Engineers Council Medal. As Vice President (Qualifications) for the Institution of Chemical Engineers, David was responsible for overseeing all membership and accreditation processes within the IChemE.

David has accredited engineering programs across Australia, Indonesia, the Netherlands, New Zealand, Singapore and the United Kingdom. His latest book, "Chemical Engineering Explained", was recently published by the Royal Society of Chemistry.



<Keynote Speeches>

Norimi Mizutani

Dean, Graduate School of
Engineering, Nagoya
University, President, Eight-
University Engineering
Association, JAPAN

2018.4 - present Dean of Graduate School of Engineering, Nagoya University

2014.4-2018.3 Director of the Center for the Studies of Higher Education, Nagoya University

2011.4 - 2013.3 Vice Dean of Graduate School of Engineering, Nagoya University

2002.10 - present Professor, Graduate School of Engineering, Nagoya University

1997.4 - 2001.9 Associate Professor, Graduate School of Engineering, Nagoya University

1991.4 - 1997.3 Associate Professor, School of Engineering, Nagoya University

1998.4 - 1991.3 Research Associate, School of Engineering, Nagoya University

Major Field: Coastal Engineering
Research topics: Coastal disaster mitigation (Tsunami, Strom surge, High waves), Wave-Structure-Sediment-Sea bottom interaction, Beach erosion control, and so on.

SPEAKERS



<Session 1>
Hong Yan
Dean College of
Science and
Engineering, City
University of Hong
Kong, P.R. CHINA

Hong Yan received his PhD degree from Yale University. He was Professor of Imaging Science at the University of Sydney and is currently Chair Professor of Computer Engineering and Dean of College of Science and Engineering at City University of Hong Kong. His research interests include image processing, pattern recognition and bioinformatics, and he has over 300 journal and conference publications in these areas. Professor Yan was elected an IAPR fellow for contributions to document image analysis and an IEEE fellow for contributions to image recognition techniques and applications. He was a Distinguished Lecturer of the IEEE SMC Society during 2010 to 2015. He received the 2016 Norbert Wiener Award from the IEEE SMC Society for contributions to image and biomolecular pattern recognition techniques.



<Session 1>
Rupesh Vasani
Director, Gujarat
Technological
University, SAL
EDUCATION
CAMPUS, INDIA

Dr. Rupesh Vasani is Ph.D and Masters in Civil Engineering from Gujarat University. He has also completed his 2nd Ph.D in Management & also Dip.in Buss. Entrepreneurship & Management from EDI. He is Post-Doctoral Researcher from PRL, Ahmedabad. He has total 28 years of experience which includes 22 years in Academic. At present he is working as a Director at SAL Institute of Technological & Engineering Research and also giving Hon. services as a DEAN (Engg.) and member of Board of Governors at Gujarat Technological University. He has total 09 PATENTS Granted and filed more than 122 patents to his credits and written 09 TEXTBOOKS. He has won several Prestigious Awards includes "Hari Om Ashram Award", "Best ISTE Teacher Award- Gujarat State", "Divya Bhaskar Jal Star Award" and many more. He has been Elected as an Executive Comm. Member of Global Engineering Dean Council, USA and also Executive Comm. Member of ISTE. He is also member of various professional National and International bodies and in various Managing committees.



<Session 1>
Masahiro Ohshima
Dean, Graduate School
of Engineering, Kyoto
University, JAPAN

Professor Ohshima started his academic career as an Instructor of Chemical Engineering at Kyoto University in 1986, just after graduating the Ph.D course of the same University. Then year 1994, he became an Associate Professor of Computer Science and Systems Engineering at Miyazaki University, which is located in southern part of Japan. Two years later, he returned to Kyoto University and was promoted to the full Professor in 2001. Since then, he has been serving as a Professor of Chemical Engineering at Kyoto University and the leader of Material Process Engineering laboratory. From the beginning of his academic career, he has devoted himself to researches in both the process control and polymer processing, especially polymer foaming. He received numerous best paper awards in both areas. He has served as the 14th president of JSPP for 2014-2016. He is a Fellow of Society of Plastic Engineers (SPE) and now serves as the dean of Engineering Faculty as well as the dean of Graduate School of Engineering, Kyoto University.



<Session 1>
Yoshimi Sonoda
Vice Dean, Department
of Engineering, Kyushu
University, JAPAN

Yoshimi Sonoda received a doctor of engineering in civil engineering from Kyushu University, Japan in 1994 and experienced research works as a guest scientist at University California, San Diego (1994-1995). After he worked at the National Defense Academy as an assistant professor (1989-1995) and a Lecturer (1995-1998), he joined Kyushu University as an associate professor (1998-2005). And then he also worked for Kyushu University as a full-professor (2005-present). Now, he is the vice dean of engineering department in Kyushu University (2015-present) and in charge of engineering education program. His research field covers structural analysis, impact engineering, and maintenance engineering. He served as the chairman of impact problem committee in Japan Society of Civil Engineering (2008-2012). He had also worked as an editor-in-chief of Journal of structural engineering in Japan Society of Civil Engineering (2013-2014).

SPEAKERS



<Session 1>
Saman Halgamuge
Director, College of
Engineering and
Computer Science,
Australian National
University, AUSTRALIA

Saman Halgamuge, Fellow of the IEEE, is a Professor and the Director/Head of Research School of Engineering, College of Engineering and Computer Science of The Australian National University. He has previously held appointments as Professor and Associate Dean International, Associate Professor and Reader, Senior Lecturer at the University of Melbourne (1997-2016). He graduated with Dipl.-Ing and PhD degrees in Data Engineering ("Datentechnik") from Technical University of Darmstadt, Germany and B.Sc. Engineering from University of Moratuwa, Sri Lanka. He is an Associate Editor of BMC Bioinformatics, IEEE Transactions on Circuits and Systems II and Applied Mathematics (Hindawi). His research that led to 250 publications has been funded over the last 22 years by Australian Research Council (16 grants), National Health and Medical Research Council (2 grants), industry and other external organisations (13 grants or contracts) and funding to support stipends for about 50 PhD students. His research contributions are in Data engineering, which includes Data Analytics based on Unsupervised and Near Unsupervised Learning and Optimization focusing on applications in Mechatronics, Energy, Biology and Medicine. His publication profile is at http://scholar.google.com.au/citations?sortby=pubdate&hl=en&user=9cafqqyWAAAAJ&view_op=list_works



<Session 2>
Chung-Che Chou
Associate Dean,
College of Engineering,
National Taiwan
University, TAIWAN

Chung-Che Chou is a Professor of Department of Civil Engineering, Director of Center for Earthquake Engineering Research, Associate Dean of College of Engineering, National Taiwan University, and head of building engineering division of National Center for Research on Earthquake Engineering (NCREE). He obtained his Bachelor degree and Master degree both from National Taiwan University and Ph.D. degree from the University of California, San Diego in 2001. He then worked at the University of California, San Diego as an Assistant Project Scientist for the New San Francisco-Oakland Bay Bridge project and the National Chiao Tung University as Associate Professor, before joining the National Taiwan University in 2008. He has published over 90 refereed journal papers and 140 conference papers. Dr. Chou's main research areas include steel structure, composite structure, earthquake-resisting design, large-scale structural testing and structure retrofit. He developed seismic-resisting braces, such as a steel self-centering brace and a sandwiched buckling-restrained brace that has been applied to several public and residential buildings in Taiwan and China for seismic reduction. Recently, he has developed a FRP-wrapped corrugated tube to simplify the fabrication of a ribbed interface between concrete and FRP, verified by column tests under high axial load associated with seismic load.



<Session 2>
**Manivannan
Kaliappan**
Dean, Mohamed
Sathak AJ College of
Engineering, INDIA

Dr. K. Manivannan is currently working CEO, Mohamed Sathak Group of Institutions and Dean-Academics of Mohamed Sathak A J College of Engineering a pioneer Institution in the state of Tamilnadu. He received his Ph.D. in Theoretical Fluid Mechanics from University of Madras.

He is chiefly prominent as a stickler for quality, team builder and a natural motivator with perseverance and integrity. Complemented with these qualities Dr. K. Manivannan's excellent communication skills and leadership qualities have earned him several headship and management positions. He is now the **Vice-President (Industry & Academia Relations) International Federation of Engineering Education Societies (IFEES)** a leading global organization connecting the world's engineering education societies and leveraging our members' collective strengths in order to improve engineering education worldwide. He is also **National Vice-President of Indian Society for Technical Education (ISTE), New Delhi**, one of the largest professional organizations in India. He was the member of Academic Council of the prestigious University of Madras for two terms of six years. He is also a member of various professional organizations such as IEEE CSI, Society of Statistics, Computer & Applications, and Indian Society for Probability & Statistics, Ramanujan Mathematical Society, and Association of Mathematics Teachers of India.

Dr. K. Manivannan is a frequent contributor to national and international journals and a regular speaker at conferences. He has visited Malaysia, Singapore, Thailand, China, Hong Kong, South Korea, Argentina, Dubai and Italy to participate in the International Federation for Engineering Education Societies (IFEES) & Global Engineering Deans' Council (GEDC) International Conference and to interact with various Stakeholders in Engineering Education.

Dr. K. Manivannan's life philosophy has always been: "Laugh so Hard That even Sorrow Smiles at You, Live Life so Well that even Death Loves to see you Alive, Fight so Hard that even Fate accepts its Defeat...."

SPEAKERS



<Session 2>

Hanxing Liu

Executive Dean, International School of Materials Science and Engineering, Wuhan University of Technology, P.R. CHINA

Hanxing Liu is the chair professor of Materials Science and Engineering and executive dean of International School of Materials Science and Engineering, Wuhan University of Technology (2016-now). He had been in various leadership positions in the last fifteen years: Dean of School of Materials Science and Engineering (2005-2016), Director of Advanced Materials Research Institute (2001-2005), etc. He worked as a senior visiting scholar at Electronic Engineering Department, Yale University (2002-2003), and Materials Research Institute, Pennsylvania State University (2012-2013).

Hanxing Liu's research work is a blend of the chemistry, physics and engineering of Inorganic Materials, especially advanced functional materials, which focuses on materials for energy storage and transfer with interesting and/or useful electrical properties, especially ionic conductors, mixed ionic/electronic conductors, semiconductors, ferro- and dielectrics. The research programs are broadly-based and cover a wide variety of topics which supported by Natural Science Foundation of China(NSFC), Ministry of Education(MOE) etc. He has over 300 SCI publications, 1 co-authored book and 30 patents. He received a number of awards, including Third Prize of Scientific and Technological Advance Reward of PLA, etc.



<Session 2>

Chang-Fa Yang

Dean, College of Electrical Engineering and Computer Science, National Taiwan University of Science and Technology, TAIWAN

Chang-Fa Yang received the B.S. degree from National Taiwan University in 1983, and the M.S. and Ph.D. degrees from The Ohio State University, Columbus, USA in 1988 and 1992, respectively, all in electrical engineering with a major in Electromagnetics at OSU Electro Science Laboratory. Then he joined the faculty in the Department of Electrical Engineering, National Taiwan University of Science and Technology (Taiwan Tech), and has been a professor since 1999. He is the Dean of the College of Electrical Engineering and Computer Science since February 2018, and has been the Director of Wireless Communication and Electromagnetic Compatibility Research Center since 2005. Also, he was the Chairman of the Department of Electrical Engineering from 2009 to 2012. In his 26 years of professional career at Taiwan Tech, he has conducted many projects from industrials and institutes in antenna, wave propagation, and high speed connector for RF solutions in wireless communications.



<Session 3>

B.R. Sarman

C.O.E., Indian Society for Technical Education(VP), KKH State Open University, INDIA

Dr. Bhabaranjan Sarman passed B.E. in Mechanical Engineering with Honours from Assam Engineering College and joined Assam Engineering Institute as lecturer in 1989. He completed Master of Engineering degree in Tribology and Maintenance Engineering from Devi Ahilya University, Indore and received PhD degree in Engineering from Gauhati University. He completed post graduate certificate course in French language. He has also undergone advanced training on CAD, CAM and Robotics from Melbourne, Australia. He has many national and international publications and also authored course books on Refrigeration and Airconditioning for KKHSOU. He was the faculty expert for N.E. India for the project National CFC consumption Phase-out Plan of ministry of environment and forestry of Govt. of India in association with UNDP, Govt. of Germany and Govt. of Switzerland from 2004 to 2010. He visited many countries like Australia, Germany, Italy, Switzerland, Singapore, Korea, Thailand, China, Nepal and Canada and participated as **panellist and session speaker in various seminars and conferences, including AEDC Summit at Hangzhou, China and NSWU, Sydney.** At present he is Professor and Controller of Examinations of Krishna Kanta Handiqui State Open University. Besides being the National Executive council member of ISTE, he is the first person from North East India to be elected as National Vice President of Indian Society for Technical Education, New Delhi.



<Session 3>

Norihiro Nakai

Dean, School of Environment and Society, Tokyo Institute of Technology, JAPAN

Professor Norihiro Nakai has been the Dean of School of Environment and Society at Tokyo Institute of Technology since April 2018. He received MSc from the University of Cambridge in 1986 and PhD in Engineering from Tokyo Institute of Technology in 1994. Currently affiliated in the Department of Architecture and Building Engineering, he is an urban planning expert and his research interest covers a wide range of urban studies, from land use planning and design to smart and resilient cities. As a planning practitioner, he gives advices to the central and local governments in determining their urban policies as well as helps making plans of various urban development projects by the private sector.

SPEAKERS



<Session 3>
Haiyun Zhao
Associate Dean,
The School of General
Engineering, Beihang
University, P.R. CHINA

ZHAO Haiyun received her master's degree from Tsinghua University, and her Ph.D degree from the Institute of Mechanics, Chinese Academy of Sciences.

As the vice dean, she worked for the International School during 2015 and 2016, where she was responsible for education and admission affairs for the International Students.

Since January 2017, she has worked for the School of General Engineering as the vice Dean.

She has been carrying on research in the field of laser processing.



<Session 3>
Guohai Dong
Dean, Faculty of
Infrastructure
Engineering, Dalian
University of
Technology, P.R. CHINA

2014-
Dean, Faculty of Infrastructure Engineering
2009-2014
Head, School of Hydraulic Engineering
2004-
Director, State Key Laboratory of Coastal
and Offshore Engineering
1999-
Professor of Ocean Engineering
1997-1999
Associate Professor of Ocean Engineering
1992-1997
Lecture of Ocean Engineering

Visiting Abroad
June 1994- June 1995
Visitor, Hydraulic Research Wallingford, UK
Nov 1999- May 2000
Visitor, The University of Western Australia,
Australia

Research Programs Underway
"Low Frequency Waves", National Natural
Science Foundation
"Hydrodynamics of Sea Cage", National
Natural Science Foundation



<Session 3>
T.S. Indumathi
Professor, Centre for
Post Graduate Studies,
Visvesvariah
Technological
University, INDIA

T.S. Indumathi has total Academic and Research experience of 25 years. She received Ph.D. in the field of Optical Fibre Communication and Networks in Visvesvaraya Technological University in 2011. She did her B.E. and M.E. in Electronics Engineering in Bangalore University. Her research areas are Optical Fibre Communication, Routing and Switching in Optical Networks, Reconfigurability in Optical Networks, Micro-Opto-Electro-Mechanical Switches etc. She has presented and published 62 Research and Technical papers in conferences and Journals including as Panel member in Asian Engineering Deans Summit (AEDS) 2016, Presented a Talk on "Inheritance in Asian Engineering Education and Research" in Zhejiang University, Hangzhou, China, delivered Talk on "Motivation and Methodology to Embody Professional Responsibility and Engineering Ethics for Societal Benefits" in Global Engineering Deans Council, November, 2016, Seoul, South Korea and delivered Talk on "Internationalization of Higher Education in Karnataka" in AEDS 2017, University of New South Wales, Sydney. Since 2018, she is serving as Chair of IEEE Photonics Society, Bangalore Chapter, India and Senior member of IEEE, Fellow of IETE IE, Life member of ISTE.



<Session 4>
Tim Cheng
Dean, School of
Engineering, Hong Kong
University of Science
and Technology, P. R.
CHINA

K.-T. Tim Cheng received his Ph.D. in EECS from the University of California, Berkeley in 1988. He has been serving as Dean of Engineering and Chair Professor of ECE and CSE at Hong Kong University of Science and Technology (HKUST) since May 2016. He worked at Bell Laboratories (1988-1993) and joined the faculty at University of California, Santa Barbara in 1993 where he was the founding director of UCSB's Computer Engineering Program (1999-2002), Chair of ECE Department (2005-2008) and Associate Vice Chancellor for Research (2013-2016). His current research interests include design automation for photonics IC and flexible hybrid circuits, memristive memories, mobile embedded systems, and mobile computer vision. He has co-authored five books, supervised 50 PhD theses, held 12 U.S. Patents. He served as Director for US Department of Defense MURI Center for 3D hybrid circuits. Cheng, an IEEE fellow, received 10+ Best Paper Awards from various IEEE and ACM conferences and journals. He has also received UCSB College of Engineering Outstanding Teaching Faculty Award. He served as Editor-in-Chief of IEEE Design and Test of Computers and was a board member of IEEE Council of Electronic Design Automation's Board of Governors and IEEE Computer Society's Publication Board.

SPEAKERS



<Session 4>
Tetsuya Nagasaka
Dean, School of
Engineering, Tohoku
University, JAPAN

Mar. 1980 B.Eng., Department of Metallurgy, Faculty of Engineering, Tohoku University
Mar. 1982 M. Eng., Department of Metallurgy, Graduate School of Engineering, Tohoku University
Mar. 1985 Ph.D, Department of Metallurgy, Graduate School of Engineering, Tohoku University
Apr. 1985 Research Associate, Department of Metallurgy, Faculty of Engineering, Tohoku University
Apr. 1992 Research Associate, MSE Department, Carnegie Mellon University, USA
Feb. 1994 Associate Professor, Department of Metallurgy, Faculty of Engineering, Tohoku University
Mar. 2002 Professor, Department of Metallurgy, Graduate School of Engineering, Tohoku University
Apr. 2010 Special Assistant to President, Tohoku University
Oct. 2011 Assoc. Member of Science Council of Japan
Apr. 2012 Department Head of Metallurgy
June 2012 Advisor to Dean, School of Engineering, Tohoku University
April 2015 Associate Dean for Research, School of Engineering, Tohoku University
April 2018 Dean and Vice-President, School of Engineering, Tohoku University



<Session 4>
Kee Chaing Chua
Dean, Faculty of
Engineering, National
University of Singapore,
SINGAPORE

Kee Chaing (KC) Chua received a PhD degree in Electrical Engineering from the University of Auckland, New Zealand in 1990 and joined the Department of Electrical Engineering at the National University of Singapore (NUS) as a Lecturer. He is now a Professor in the Department of Electrical & Computer Engineering at NUS. He served as the Faculty of Engineering's Vice Dean for Research twice, from 2003 to 2006 and from 2008 to 2009. From 1995 to 2000, he was seconded to the Centre for Wireless Communications (now the Institute for Infocomm Research), a national telecommunication R&D center funded by the Singapore Agency for Science, Technology and Research as its Deputy Director. From 2001 to 2003, he was on leave of absence from NUS to work at Siemens Singapore where he was the Founding Head of the Mobile Core R&D Department funded by Siemens' ICM Group. From 2006 to 2008, he was seconded to the National Research Foundation as a Director. He was appointed Dean of the Faculty of Engineering at NUS in July 2014, after serving as Head of its Department of Electrical & Computer Engineering since November 2009. He chaired the World Economic Forum's Global Agenda Council on Robotics and Smart Devices in 2011 and spoke on the role of robotics and smart devices in shaping new models of development at the World Economic Forum in Davos in January 2012. He is a recipient of an IEEE 3rd Millennium Medal, a Fellow of the Singapore Academy of Engineering, and a Fellow of the Institution of Engineers, Singapore.



<Session 4>
Dai Senoo
Professor, School of
Engineering, Tokyo
Institute of Technology,
JAPAN

Dai Senoo is Professor of Department of Industrial Engineering and Economics, School of Engineering in Tokyo Institute of Technology. He received a doctor degree in commerce from Hitotsubashi University. He served as an assistant professor of Japan Advanced Institute of Science and Technology, JAIST (1998-2002). After he worked at the Department of Industrial Engineering and Management as an associate professor (2002-2017) in Tokyo Institute of Technology. Now he has been appointed as a full-professor in Tokyo Institute of Technology (2017-present). Currently, his research fields include Organization Theory, Information systems, Business Creation, Work Style and Knowledge Management. He has published over 80 papers and four books and seven book chapters. He is Director of CBEC entrepreneurship education program in Tokyo Institute of Technology. He acted as the Director of General Affairs of the Japan Society for Management Information (2011-2012). He was also member of Intellectual Productivity Committee of Ministry of Land of Infrastructure and Transport (2007-2013). And he is member of Future City Initiative Committee of Cabinet Office (2013-present).



<Keynote Speeches>
Naonori Kurokawa
The University of Tokyo
Edge Capital, JAPAN

Naonori Kurokawa (Nori) is a partner of The University of Tokyo Edge Capital (UTEC). He focuses on physical and life science investments including, advanced materials, nanotechnology, optoelectronics, analytical equipment, therapeutics, and medical devices. He is a director of university spin-offs such as Microwave Chemical, FLOSFIA, Quantum Biosystems, MOLCURE and PROVIGATE. Prior to joining UTEC, Nori was an analyst of ARCH Venture Partners, working on due diligence of university spinout investment in US. Prior to ARCH, he was with Samsung Electronics in South Korea, as a senior engineer. He was responsible for R&D of laser printer, specializing in imaging process and material development. Previously, he was a researcher at the Laboratory of Environmental Technology, Ricoh, Japan. He researched on imaging device, battery, and printing technology. He has three issued patents and seven pending patents in the US. Nori earned Ph.D. in applied physics from Osaka University in 2003 and MBA from the University of Chicago Booth School of Business where he won the first place and the award for the most innovative plan in Edward L. Kaplan New Venture Challenge 2008.

SPEAKERS



<Session 5>
Hiroshi Mitani
Dean, Graduate School
of Frontier Sciences,
The University of
Tokyo, JAPAN

Hiroshi Mitani graduated in 1979 from Faculty of Science, the University of Tokyo and went on to gain a Ph.D. in Science in 1985 from the University of Tokyo. He started his professional career at Faculty of Medicine of Kyoto University as a Research Associate, before joining the School of Science, the University of Tokyo as an Instructor in 1986 where he was promoted to a Lecturer (1990) and an Associate Professor (1994). He also held Visiting Associate Professor's position at Radiation Biology Center Kyoto University (1998 – 2001). He then moved in 1999 to Graduate School of Frontier Sciences, the University of Tokyo, and was made a full Professor in 2003.

Mitani was appointed Dean of Graduate School of Frontier Sciences in 2017 after successfully fulfilled his responsibilities as a Vice Dean from 2013 to 2016.

Mitani is specialized in the areas of radiation biology and fish genomics, and regarded a pioneer and leading researcher in the field of environmental toxicology and DNA damage responses. He was, and is, a member of Steering Committee of the Radiation Biology Center of Kyoto University (2009-12, 2014-). He also served as a Councilor of the Japanese Radiation Research Society from 2010 to 2017.



<Session 5>
Komsan Maleesee
Dean, Faculty of
Engineering, King
Mongkut's Institute of
Technology,
Ladkrabang, THAILAND

Assoc. Prof. KOMSAN MALEESEE is currently the Dean of Engineering at King Mongkut's Institute of Technology Ladkrabang (KMITL), Thailand. Komsan obtained his master and doctoral degrees in Civil Engineering from Tokai University, Japan, 2001 and 2005, respectively. His undergraduate study was in Construction Engineering from King Mongkut's Institute of Technology Ladkrabang. He was also the 39th President of The Council of Engineering Deans of Thailand, Chief of Member Relationship, the Engineering Institute of Thailand under H.M. the King's Patronage, the advisory committee member to the Accident and Disaster Coordination Center at The Engineering Institute of Thailand under H.M. the King's Patronage, and Executive Board Member in Concrete and Material Department at The Engineering Institute of Thailand under H.M. the King's Patronage. During his executive term as the Dean of Engineering, he has tremendously initiated a number of projects and programs. He has sparked the active learning scheme for the institute and a number of active learning facilities and spaces have been contributed at the Faculty of Engineering since then. Under his executive term, 5 international programs have been launched and currently successfully functioned. These programs are the wakeup call for KMITL to open for internationalization in the very near future.



<Session 5>
Jhy-Chern Liu
Dean, College of
Engineering, National
Taiwan University of
Science and
Technology, TAIWAN

Dr. J.C. Liu is professor of Department of Chemical Engineering, and Dean of College of Engineering and, National Taiwan University of Science and Technology (Taiwan Tech). He received his PhD in Environmental Engineering, University of Delaware in 1990. He served as Director of Office of Environment, Safety and Hygiene, and Chairman of Department of Chemical Engineering. Currently, his research includes physical-chemical processes for wastewater treatment and reuse, and extraction and recovery of rare metals in industrial sludge and e-wastes. He has published over 80 scientific papers and two book chapters.



<Session 5>
Abdul Aziz Abdul Raman
Dean, Faculty of
Engineering, University
of Malaya, MALAYSIA

Abdul Aziz Abdul Raman is a professor at the Department of Chemical Engineering and the Dean at the Faculty of Engineering, University of Malaya (UM). He has published more than 200 papers in journals and conference proceedings. His research interest is on mixing in stirred vessels, cleaner production and advanced wastewater treatment. He has supervised more than 80 PhD and Master students. Prof. Aziz has also assisted many small and medium industries in their greening initiatives. Currently he is also one of the Associate Directors of the Malaysian Engineering accreditation Department that accredit engineering programs in Malaysia. He was also the Chairman of Institution of Chemical Engineers, UK, Malaysian Branch from 2016 to 2017.

SPEAKERS



<Session 5>

Norman C Tien

Dean, Faculty of
Engineering, University
of Hong Kong, P. R.
CHINA

Professor Norman C. Tien is the Dean of the Faculty of Engineering at the University of Hong Kong, and the Chair Professor in the Department of Microsystems Technology in the Department of Electrical and Electronic Engineering. Supporting the drive for Innovation and Technology in the society, Professor Tien takes up different advisory roles in the Government including Committee on Innovation, Technology and Re-industrialisation, the Research Grants Council, Airport Technology Advisory Council, and chairs the Robotics Alliance under the Hong Kong Science and Technology Parks Corporation. Prior to joining HKU, he served for five years as Dean and Nord Professor of Engineering at Case Western Reserve University's Case School of Engineering. He was also the Ohio Eminent Scholar in Condensed Matter Physics. Prior to CWRU, Professor Tien served as chair of the Department of Electrical and Computer Engineering at the University of California at Davis and held a joint appointment at the University of California at Berkeley. He previously held faculty positions in Cornell University's Department of Electrical and Computer Engineering. Professor Tien received his Ph.D. from the University of California at San Diego, his MS from the University of Illinois, and his BS from the University of California at Berkeley.



<Session 5>

Yasushi Asami

Vice Dean, Graduate
School of Engineering,
The University of
Tokyo, JAPAN

Graduated from the Department of Urban Engineering at the University of Tokyo in 1982. Earned Ph.D. in the Department of Regional Science at University of Pennsylvania in 1987. Research Associate from 1987 to 1990 in the Department of Urban Engineering at the University of Tokyo. Lecturer from 1990 to 1992 in the Department of Urban Engineering at the University of Tokyo. Associate Professor from 1992 to 2001 in the Department of Urban Engineering at the University of Tokyo. Professor from 2001 to 2012 in the Center for Spatial Information Science at the University of Tokyo. Professor from 2012 till now in the Department of Urban Engineering at the University of Tokyo. Vice Dean from 2017 till now in the School of Engineering at the University of Tokyo.



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