2016 ASEE INTERNATIONAL FORUM
PRESENTED BY THE BOEING COMPANY

Convention Center, Hall F, Rooms 260-264
New Orleans, Louisiana
Saturday, June 25, 2016
JOIN US NEXT YEAR IN COLUMBUS!

June 2017
Great Columbus Convention Center
Columbus, OH

WELCOME AND GREETINGS FROM ASEE

We welcome and thank the participants, speakers and partners to the 2016 ASEE International Forum. We look forward to your active engagement in this year’s Forum.

The purpose of the International Forum is to bring together engineering professionals from academia and industry from around the globe who are engaged in innovative engineering education initiatives to share information on experiences and best practices with particular interest in highlighting engineering education activities involving at least two nations.

The 2016 ASEE International Forum will be held June 25 in New Orleans, Louisiana. The event will feature plenary speakers from UNESCO, ABET, SPEED, IFEES, and GEDC. A unique feature of this year’s forum will be a virtual session for those unable to attend the forum in person. In all, the one-day Forum will consist of plenary presentations, three paper sessions arranged into concurrent tracks, and virtual presentations.

By organizing this event, ASEE reaffirms its commitment to furthering education in engineering by encouraging local, national, and international communication and collaboration and recognizing outstanding contributions of individuals and organizations. It is our hope that the Forum will provide opportunities for all participants to engage in stimulating discussions and will serve as a bridge to foster future collaborations.

ASEE is pleased to have the continued engagement of The Boeing Company, the world’s largest aerospace company and leading manufacturer of commercial jetliners and defense, space and security systems, in the International Forum. We want to express special thanks and appreciation to the Boeing Company for their generous support to this year’s International Forum.

We look forward to hosting you in New Orleans!

Catherine Skokan, PhD
Vice President of External Affairs

Ashok Agrawal, D.M., P.E.
Managing Director, Professional Services
ASEE gratefully acknowledges the following societies for participating in the 2016 International Forum.

**PARTICIPATING ORGANIZATIONS**

- ABET
- GEDC
- IFEES
- UNESCO

**INTERNATIONAL FORUM STEERING COMMITTEE**

- **Howard Appelman (Chair)**
  The Boeing Company
- **Indira Nair**
  Professor and Vice Provost Emeritus
  Carnegie Mellon University
- **Wayne T. Davis**
  Dean, College of Engineering
  Endowed Dean’s Chair and Professor of Civil and Environmental Engineering
  University of Tennessee
- **Phil Sanger**
  Professor
  School of Engineering Technology
  Purdue Polytechnic Institute
- **Catherine Skokan**
  Vice President, External Relations
  Colorado School of Mines

**THANK YOU TO OUR PRESENTING SPONSOR WHO HELPED MAKE TODAY’S EVENT POSSIBLE**

Howard Appelman is the Boeing Company Focal for the American Society for Engineering Education (ASEE) and is a member of the ASEE Corporate Member Council.

Howard Appelman joined The Boeing Company in 1982 as an Electronics Engineer. He is currently an Associate Technical Fellow in Boeing Research & Technology (BR&T) assigned to the Manufacturing Technology Integration (MTI) organization in St. Louis, MO. Mr. Appelman is an expert in the application of advanced manufacturing technology to the assembly, integration, and testing of aerospace products, and in the development of Lean+ and Breakthrough Processes. He also participates on Boeing’s External Technical Affiliations Integration Board and is a focus area leader in Boeing's Global Technology Strategic University Program.

Howard Appelman is an Adjunct Prof. of Mechanical Engineering at the Missouri University of Science and Technology (MS&T) where he teaches graduate level courses in “Design for Manufacturing” and “Concurrent Engineering”.

United Nations Educational, Scientific and Cultural Organization
PARTNER ORGANIZATION PLENARY I - ABET

Michael K. J. Milligan is Executive Director and CEO of ABET, a nonprofit organization that accredits nearly 3,600 college and university programs in the disciplines of applied science, computing, engineering, and engineering technology located in 29 countries. In this role, Milligan leads a full-time staff headquartered in Baltimore supporting the operations of over 2,200 accreditation experts. Milligan is responsible for all aspects of ABET’s global operations and reports directly to the Board of Directors.

Prior to joining ABET, Milligan worked for the Aerospace Corporation developing a new generation environmental satellite for the National Oceanic and Atmospheric Administration (NOAA). He also served 24 years as a career U.S. Air Force officer working in the areas of operations, international research & development, and technology acquisition. He served six years as an associate professor and Deputy Department Head in the Department of Electrical and Computer Engineering at the U.S. Air Force Academy, in Colorado.

Milligan earned a Ph.D. from The University of Texas at Austin, an M.S.E. from the University of Massachusetts at Lowell, and a B.S. from Michigan State University - all in electrical engineering. He also earned an M.B.A. from Western New England College, Springfield, MA and is a Certified Association Management Executive (CAE). Milligan is a senior member of the Institute of Electrical and Electronics Engineers (IEEE), a member of the Tau Beta Pi Engineering Honor Society, and a registered professional engineer in Colorado and Maryland. He lives in Severna Park, Maryland with his engineer wife and their two sons.

LUNCH SPEAKER, PRESENTED BY BOEING

Candice M. Smith, PMP, is currently director of Global Engineering & External Technical Affiliations in ET&T. She was previously chief of staff to the Chief Technology Officer and leader of the EO&T Business Integration organization. Prior roles include project engineer managing direct foreign investment / technology transfer offset projects focused on India; Systems engineer on Dallas Special Projects team, BR&T Support and Services, and Future Combat Systems; Integration Engineer on the Joint Helmet Mounted Cueing Systems; and began her career as a Boeing Co-op student. Candice’s interests include promoting students’ interest in math, science, and technology through engagement and mentoring. She’s a graduate of the 2006 class of Greater Missouri Leadership Challenge and recipient of St. Louis American Foundation Salute to Young Leaders award and St. Louis Business Journal 30 under 30 award for professional and personal excellence. She proudly serves on the board of the Metro Theater Company, Illinois Board of Juvenile Justice, and several other organizations.

PARTNER ORGANIZATION PLENARY II - UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANISATION (UNESCO)

Rovani Sigamoney is a chemical/environmental engineer from South Africa who started in the platinum refinery/mining sector and then moved on to researching bioenergy systems and biofuels for Africa.

She joined the United Nations Educational, Scientific and Cultural Organisation (UNESCO) HQ in Paris, France in 2007 in the Natural Sciences Sector and later ran the Chemistry programme and International Year of Chemistry 2011. She thereafter took over the UNESCO Engineering programme. The Engineering Programme is working with Member States (UNESCO has 195 Member States), international partners and program experts to strengthen engineering education through curricula development, hands-on training and capacity building. In line with UNESCO’s global priorities on Africa and Gender Equality, it focuses on women and Africa but also has activities around the world. Rovani is passionate about women in engineering and encouraging more youth to pursue careers in engineering.

She previously worked at the United Nations Environment Programme (UNEP), Paris on a biofuels strategy and also at the Wuppertal Institute of Climate Change in Germany on a policy document for the European Parliament on the security of energy supply.

PARTNER ORGANIZATION PLENARY III - IFEES, GEDC, SPEED

Hans-Jürgen Hoyer, Ph.D. is the Secretary General of the International Federation for Engineering Education Societies (IFEEES), Executive Secretary of the Global Engineering Deans Council (GEDC), and Resident Scholar in Global Engineering at Marquette University. Former Director of International Programs and Strategy for the American Society for Engineering Education (ASEE) and co-founder of the Indo-US Collaborative for Engineering Education (IUCED). He serves on various advisory committees globally.

Prior to 2006, Hans J. Hoyer was CEO of World Links, a spin-off of the World Bank. In this capacity, he worked globally on issues related to secondary education, teachers’ education, and on-line collaborative learning focusing on science and social studies among high school students across the globe. Dr. Hoyer has been a Visiting Scholar at the Center for International Studies at MIT, a Fellow at Harvard’s School of Education and Visitor at the Kennedy School of Government. He was dean of the graduate program at the School for International Training, World Learning and Executive Director of the Executive Training Program for global governmental and NGO leaders in Brattleboro, Vermont. He also taught at George Mason University in Fairfax, VA. and Montgomery College, Takoma Park, MD. He earned his Ph.D. at American University in Washington, D.C. and was a post-doctoral fellow at the Organization of
American States, carrying out research in the Rio de la Plata region of South America. He is Honorary Professor in universities in Hungary, India, Peru and Kazakhstan. He started his career as a Peace Corps Volunteer and high school teacher in Linares and Talca, Chile and has lived in India, Sri Lanka, Chile, Peru, Brazil, Ecuador, Paraguay, Argentina, Mexico, Belgium, Germany and Sub-Saharan Africa (Kenya and Zimbabwe).

Over his extensive career he has visited 138 countries, is fluent in four languages and conversant in an additional five languages. Dr. Hoyer has led several international development programs, including CARE, Pien International, and Heifer International. In these latter roles, he held executive leadership positions such as Senior VicePresident/Chief Operating Officer, and Regional Executive. He also represented the largest U.S. farming membership association as a spokesperson at the European Union and European Parliament in Brussels and also represented them in Mexico and Central America.

He has served on the board of directors with Nelson Mandela of El Taller, a global civil society network headquartered in Tunisia as well as on several social-action community groups. He was also on the staff of the Inter American Foundation, created by the U.S. Congress to support socio-economic development throughout Latin America/Caribbean. He was on the advisory board of Hewlett Packard’s e-Inclusion Global Advisory Board related to their work in South Africa and Founding member of the Board of the Engineering for the Americas (EITA) initiative under the umbrella of the OAS. He serves on the Editorial Committee of the Argentinean Journal of Engineering Education, Science and Technology and is a member of the Consultative Committee at Aalborg University and UNESCO.

He has written and published on a broad range of subjects related to international development, politics, health, education, and engineering education. Born in Berlin, Germany, he immigrated to the US as a teenager. His wife is Canadian and he has four children who were born in the U.S., Brazil, Mexico and Belgium.

Peter Kilpatrick serves as the current Chairperson of the Global Engineering Deans Council (GEDC), and on the Executive Committee of the International Federation of Engineering Education Societies (IFiEES). He is the McCloskey Dean of Engineering at the University of Notre Dame in Notre Dame, Indiana, USA. Kilpatrick joined Notre Dame in January 2008 from North Carolina State University (NCSU), where he had served on the faculty for 25 years and as head of the Department of Chemical and Biomolecular Engineering since 1999. He also served as the Founding Director of the North Carolina Biomanufacturing Training and Education Center (BTCE), a unique learning and training facility designed to train the next generation of Biopharmaceutical professionals and Biotechnology industry professionals.

Kilpatrick conducts research in colloidal and interfacial science, with an emphasis on the colloidal and molecular properties of petroleum and on biological membranes. His specific interests are in the ways in which complex molecules aggregate in solution and the ways in which those aggregates self-assemble on and adsorb to interfaces. His work is leading to oil production and refining that is both more energy efficient and better for the environment. He is the author of more than 90 refereed journal publications and the holder of 13 patents.

In his time at the University of Notre Dame as Dean of Engineering, the College has grown its undergraduate enrollment by nearly 80%, has increased the size of its faculty by more than 40% and has more than doubled its external research funding to more than $50 Million per year.

Michael E. Auer is Vice-Rector and Professor of Electrical Engineering at Carinthia University of Applied Sciences Villach and Professor for Microelectronics at University of Klagenfurt, Austria. His current research is directed to technology enhanced learning and remote working environments especially in engineering.

He is author or co-author of more than 190 publications and leading member of numerous national and international organizations in the field of Online Technologies.

Michael Auer is founder and chair of the annual international IEEE EDUCON, ICL and REV conferences and chair or member of the Program Committees of several international conferences and workshops. He works as an evaluator and coordinator of European Union funded research projects and is member in expert groups of the European Commission as well as US NSF.

Michael Auer is Founding-President and CEO of the “International Association of Online Engineering” (IAOE) since 2006, a non-governmental organization that promotes the vision of new engineering working environments worldwide. In 2009 he was appointed as member of the Advisory Board of the European Learning Industry Group (ELIG). Furthermore, he is one of the founders and Secretary General of the “Global Online Laboratory Consortium” (GOLC). GOLC is the result of an initiative started in 2009 at MIT to coordinate the work on educational Online Laboratories worldwide. From 2010-2016 he served as President of the “International Society of Engineering Education” (ISIP).

During the World Engineering Education Forum (WEEF2015) he was elected as President of the International Federation of Engineering Education Societies (IFiEES) for 2016-2018.

Uriel Cukierman is President of IFiEES, member of the GEDC Executive Committee and Director of the Center for Educational Research and Innovation at the Universidad Tecnológica Nacional (UTN) in Argentina. He has recently been appointed as Research Professor at the University of New Mexico, USA. He has served as the Dean of Engineering at the Universidad de Píeles, Argentina and, previously, as the Information & Communications Technologies Secretary at UTN for more than 15 years. Recently awarded as “Distinguished Educator” by the IOEM, “Honorary Professor” by the Universidad Ricardo Palma in Lima, Peru and International Engineer Educator Honoris Causa “Ing Paed.IGIP h.c.” Produced three books about Learning Technologies and Engineering Education, one of which was published by Pearson. Authored 5 book chapters and more than 50 papers in refereed journals and conferences.

Avneet Hira is a doctoral student in the School of Engineering Education at Purdue University. Avneet is the Vice President – Educational Content for SPEED. Her research includes k-12 education and first year engineering in light of the engineering design process, and inclusion of digital fabrication labs into classrooms. Her current work is on the use of classroom Makerspaces for an interest-based framework of engineering design. She is also interested in understanding the social and cultural underpinnings of engineering education, to study and develop indigenous engineering capabilities. After completing a B.E. in Aeronautical Engineering from PEC University of Technology, she received an M.S. in Aerospace Engineering from Purdue University.
Dhinesh Radhakrishnan is a doctoral student in the School of Engineering Education at Purdue University. His research includes utilization of technology in education, and socially constructed education in low-resource settings. His current work is on developing engineering skills curriculum for out-of-school youth in Africa utilizing digital learning materials. Dhinesh is the Global Student Forum Chair for 2016 in SPEED. He is also the Co-Director of Footsteps. He has been associated with SPEED for the past 6 years and served in various positions. Dhinesh holds a Bachelor in Electrical Engineering and Masters in Energy Systems (Specialization in Renewable Energy).

2016 ASEE INTERNATIONAL FORUM PROGRAM

ALL ACTIVITIES WILL BE HELD IN HALL F, NEW ORLEANS CONVENTION CENTER, ROOMS 260-264

7:00 a.m. – 5:00 p.m. Registration
ROOM 260 FOYER

7:30 a.m. – 8:00 a.m. Continental Breakfast
ROOM 260 FOYER

8:00 a.m. – 8:30 a.m. Introduction and Welcome
ROOM 260

Presenters:
Ashok Agrawal
Managing Director, Professional Services
Director, External Affairs
American Society for Engineering Education (ASEE)

Howard Appelman
Chair, International Forum Steering Committee

8:30 a.m. – 9:45 a.m. Partner Organization Plenary I
ROOM 260

Ethics in International Engineering Education
Is ethics viewed the same around the world? What are societies’ expectations of engineers and ethics? This plenary talk highlights the importance of integrating ethics into engineering education on a global scale. Recent examples of lapses in ethical judgment and corruption in engineering environments will be discussed.

Presenter: Michael K. J. Milligan
Executive Director and CEO of ABET

9:45 a.m. – 10:15 a.m. Networking break
Sponsored by The Boeing Company
ROOMS 260 FOYER

10:15 a.m. – 11:45 a.m. Concurrent Paper Tracks 1 - Session I

• Accreditation
Moderator: Indira Nair

• Study Abroad Programs
Moderator: Howard Appelman

• Curriculum
Moderator: Wayne Davis
10:15 a.m. – 11:45 p.m. Concurrent Paper Tracks Session I - Accreditation

ABET Accreditation of International Technology Programs—A Team Chair's Perspective
Amitabha Bandyopadhyay, State University of New York, Farmingdale

Professional Accreditation of Engineering Programmes and EUR-ACE labels in Central Asia
Sergey Gerasimov, Siberian Transport University

Professor Tolkacheva, Association for Engineering Education of Russia
Yury P. Pokhlokov, Tomsk Polytechnic University, Association for Engineering Education of Russia
Kseniya K. Tolkacheva, Association for Engineering Education of Russia
Tomsk Polytechnic University
Jose Carlos Quadro, Mr. P.E., Instituto Superior de Engenharia da Porto

AEER Accreditation of Educational Programs—Quality Assurance Aims and Requirements
Kseniya K. Tolkacheva, Tomsk Polytechnic University, Association for Engineering Education of Russia
Yury P. Pokhlokov, Tomsk Polytechnic University, Association for Engineering Education of Russia
Sergey B. Mogilnickiy, Tomsk Polytechnic University
Maria Yurievna Chervach, Tomsk Polytechnic University
Jose Carlos Quadro, Mr. P.E., Instituto Superior de Engenharia da Porto

Triple-Helix and International Collaboration to Design and Implement an Outcomes Based Engineering Curriculum to Better Serve Stakeholders in Valparaiso-Chile
Uriel Ruben Cukierman, IFEEES

Lueny Morell, InnovaHiEd

Rene Alejandro Noel, Universidad de Valparaiso

Roberto Munoz, Universidad de Valparaiso

Eduardo Vendrell Vidal, Polytechnic University of Valencia

Carlos Becerra, Escuela de Ingeniería Civil Informática, Universidad de Valparaíso

Carmen Gloria Prado, Mg., Universidad de Valparaiso

IEET's Mentoring of Myanmar in Engineering Accreditation System
Mandy Liu, Institute of Engineering Education Taiwan (IEET)

Liang-Jenq Leu, Dept. of Civil Engineering, National Taiwan University

Charlie Than, Myanmar Engineering Council

Comparison of Surveying Engineering Education in USA and Turkey
Esra Tekdal Yilmaz, Pennsylvania State University, Lehman

10:15 a.m. – 11:45 p.m. Concurrent Paper Tracks Session I - Study Abroad Programs

The Case of an Electrical and Computer Engineering (ECE) Department in the Internationalization Process of a Research I Public Institution
Fabiola P. Ehlers-Zavala, Colorado State University

Anthony A. Maciejewski, Colorado State University

Implementing and Integrating International Research into the Engineering Curriculum at Lincoln University, Pennsylvania and the University of the West Indies, Trinidad
Monica Gray, P.E., Lincoln University

Constance Loretta Lundy

Toward Success of Collaborative Program in School of Engineering Between the US and China
Jeongkyu Lee, University of Bridgeport

Sarosh H. Patel, University of Bridgeport

Brian Lim, University of Bridgeport

Roger Dianlei Geng, Ph.D., Wuhan University of Science and Technology

Zhigang Jiang, Wuhan University of Science and Technology

Strategies for Increasing Student Participation in International Programs
James N. Warnock, Mississippi State University

Galya Melnychuk, Mississippi State University

The Challenges and Lessons Learned in Establishing a Travel Course
Yanjun Yan, Western Carolina University

Paul M. Yanik, Western Carolina University

Sudhir Kaul, Western Carolina University

Chip W. Ferguson, Western Carolina University

Robert D. Adams, Western Carolina University

Wes Stone, Western Carolina University

Hugh Jack, Western Carolina University

Jeffrey L. Ray, Western Carolina University

Best Practices in Globalizing Engineering Students
Allison Wright, Texas Tech University

Ashley Nicole Haseley, Texas Tech University

Comparison of Two Project-Based Learning Experiences in Panama City, Panama
Aaron Richard Sakulich, Worcester Polytechnic Institute

Concurrent Paper Tracks Session I - Curriculum

Administering a U.S. based M.S. degree in Kilimanjaro, Africa—A Global Benchmarking in Regulatory Science
Mitchell L. Springer, PMP, SPHR, Purdue University, West Lafayette
Kari L. Clase, Purdue University, West Lafayette
Lauren Ann Terruso, Purdue University

The Pathway to Systems Education for the Global Engineer
Alice F. Squires, Washington State University
Jon Patrick Wade, Stevens Institute of Technology (School of Systems & Enterprises)
Nicole A. C. Hutchison, Stevens Institute of Technology

A Localized National Engineering Education and Research Outreach Model for Engineering Workforce Pipeline
Otsebele E. Nare, Hampton University
Vitaly Khaykin, Hampton University
Hoshang Chegini, Hampton University
Chandra T. Oaks-Garcia, Time Out 4U, Inc.
Adeyinka A. Adeyiga, Hampton University
Vadivel Jagasivamani, Hampton University

Bachelor Degree Program “Software Engineering” in the Higher School of Economics: Background and Perspectives
Sergey M. Avdoshin, National Research University Higher School of Economics
Valery V. Shilov, National Research University Higher School of Economics, Moscow, Russian Federation
Sergey A. Silantiev

Developing Innovative Interdisciplinary Biomedical Engineering Programs in Nigeria: Lessons Learned
David W. Gatchell, Ph.D., Northwestern University
Robert Linsenmeier, Northwestern University
Matthew R. Glucksberg, Northwestern University
Robert L. Murphy, Northwestern University
Akinwale Oladotun Coker, P.E., University of Ibadan
Akinnuyi A. Osuntoki, University of Lagos, Lagos, Nigeria

Individual Peculiarities of Engineering Students Attending Minor Degree Programs—Research on Psychology and Education
Farida Tagirovn Shageeva, Kazan National Research Technological University
Inna Mikhailovna Gorodetskaya, Kazan National Research Technological University
Liliya Vasilievna Prikhodko

A Global Framework for Understanding Cross Cultural Teaching Experiences Gained in Japan
Douglas Moore Schutz, Tokyo University of Science
Dante Dionne, Korean Air
Yong-Young Kim, Konkuk University

11:45 a.m. – 1:00 p.m.
Networking Lunch
Sponsored by The Boeing Company
ROOM 261
Presenter: Candice Smith
Director - Global Engineering and External Technical Affiliations

1:00 p.m. – 2:15 p.m.
Partner Organization Plenary II - UNESCO
ROOM 260

2:15 p.m. – 2:45 p.m.
Networking Break
ROOMS 260 FOYER

2:45 p.m. – 4:30 p.m.
Concurrent Paper Tracks Session II - Outreach
ROOM 262

Learning Off the Grid: Implementing Engineering Service Projects in Developing Countries to Achieve Student, Faculty, and Community Outcomes
Paul John Ackerman, Jr., P.E., Virginia Military Institute
Tim Moore, P.E., Virginia Military Institute
Tyler Adam Brickle

The Global Student Forum: A Model for Developing Student Leaders in Engineering Education
Libanos Redda, SPEED (Student Platform for Engineering Education Development)
Fabian Reichl, SPEED
Agustin Ferrario, National Technological University, Resistencia Faculty, Argentina
Rohit Kandakatla, SPEED
Dhinesh Balaji Radhakrishnan, SPEED

Preparing Globally-Competent and Competitive STEM Workforce of the 21st Century in the Global STEM Classroom®
Vitaly Popov, University of San Diego, The Global STEM Education Center, Inc.
Larisa K. Schelin, The Global STEM Education Center, Inc.
Russell Faux, DSRA

Multination Research Programmes: The UNESCO Unit Win in Humanitarian Engineering Outreach Case Study
Jane Goodyer, P.E., Massey University
Lizzie Miles, Coventry University UK
Anh Lan Ho Tran, Coventry University

The STEM Loop: Undergraduate Engineering Students Create a STEM Children’s Book
Leslie Seawright, Texas A&M University at Qatar
Ibrahim Hassan, P.E., University of Texas, Austin
2:45 p.m. – 4:30 p.m. Concurrent Paper Tracks Session II - Skills Development

ROOM 263

Building Global Infrastructure for Diversity and Inclusion in Engineering Education
Autumn Marie Reed, University of Maryland, Baltimore County
Renetta G. Tull, University of Maryland, Baltimore County
David A. Delaine, Universidade de Sao Paulo
Darryl N. Williams, Tufts University
Rovani Sigamoney, UNESCO

Understanding International Perspectives in Science and Engineering Ethics
Thomas M. Powers, University of Delaware

Enhancing Multiple Thinking through the Engineering Design Process
Jaby Mohammed, Petroleum Institute
Mary Ragnhild Hatakka, Petroleum Institute

An Empirical, Comparative Approach to Engineering Ethics (Education) in International and Cross-Cultural Contexts—A Study Concerning Chinese Engineering Students’ Knowledge of and Views Concerning Contents and Concepts Related to Engineering Ethics
Rockwell Franklin Clancy III, University of Michigan-Shanghai Jiao Tong Joint Institute
Gang Zheng, University of Michigan-Shanghai Jiao Tong University Joint Institute
David L. S. Hung, University of Michigan-Shanghai Jiao Tong University Joint Institute

The Design and Implementation of Engineering Leadership Programs: A Comparative Study
Hu Yu, Shanghai Jiao Tong University
Jiabin Zhu, Shanghai Jiao Tong University

The Attributes of Future 2030 Engineers in Qatar for Innovation and Knowledge Based Economy
Mahmoud Abdulwahed, Qatar University

Empowering Women in Engineering
Saud A Ghani, Qatar University

2:45 p.m. – 4:30 p.m. Concurrent Paper Tracks Session II - Courses

ROOM 264

Australasian Partnership in a First Year Engineering Course: Deakin University and Wuhan University of Science and Technology
Sivachandran Chandrasekaran, P.E., Deakin University
John Matthew Long, Deakin University
Yanan Wang, P.E., School of Engineering, Deakin University, Waurn Ponds, Geelong, Victoria, Australia
Junior Nomani, Deakin University
Qiang Zhao, Wuhan University of Science and Technology
Zhigang Jiang, Wuhan University of Science and Technology
Roger Dianlei Geng, Ph.D., Wuhan University of Science and Technology
Bernard Rolfe, Deakin University

Supporting STEM Knowledge and Skills in Engineering Education—The PELARS project
Dorian A. Cojocaru, University of Craiova
Anna Friesel, Technical University-Copenhagen
Daniel Spikol, Malmo University

Enhancing Undergraduate Student Learning Experience in an Environmental Engineering Course through Use of Technology and Industry Partnership
Lokesh P Padhye, The University of Auckland

The Global Online Laboratory Consortium and its Role in Promoting a Global Cloud of Cyber Physical Laboratories
Michael E. Auer, CTI Villach, Austria
Abul K. M. Azad, Northern Illinois University

Singapore-U.S. Tactical All-Inclusive Navigation (SUSTAIN) Collaborative innovation
Frederick C Webber, Air Force Research Laboratory
KelseyLee Hunter Schafer, Air Force Research Laboratory
Eric T. Vinande, Air Force Research Laboratory
John P. McIntire, US Air Force Research Laboratory
Kristin L. Wood, Singapore University of Technology and Design (SUTD)
Daniel D. Jensen, US Air Force Academy
Shahdui Foong, Singapore University of Technology and Design
Wai Yong Chue, DSO National Laboratories
Yaohui Li, DSO National Laboratories
Kevin Ang, Temasek Laboratories @ National University of Singapore
Richard H. Crawford, P.E., University of Texas, Austin
Gabriel Hoongwen Wong, DSO National Laboratories

India and Japan Joint Project-Based Learning—What was Learned from the Design Thinking Workshop
Ayano Ohzaki, P.E., Okayama University
Teaching Oral Communication at a Russian University: Helping English Language Learners Present their Engineering Designs
Jennifer Craig, Massachusetts Institute of Technology

Experience of Teaching an Introductory Biomedical Engineering Course for Undergraduate ECE Students in Pakistan
Ijlal Haider, The University of Lahore
Farhan Ahmad, UOL
Nishwa Fayyaz, Virtual University, Pakistan

Using Service Oriented Remote Laboratories in Engineering Courses
Hamadou Saliha-Hassaneing., TELUQ – University of Quebec
Mamane Moustapha Dodo Amadouing., Ecole de technologie Supérieure
Maarouf Saad, Ecole de Technologie Supérieure
Willie K. Ofosu, Pennsylvania State University, Wilkes-Barre

Partner Organization Plenary III
Presented by the International Federation of Engineering Education Societies (IFEES), Global Engineering Deans Council (GEDC), and SPEED
ROOM 260
Moderator: Michael Auer
IFEES President Elect, 2015–2016
Carinthia University of Applied Sciences
Villach, Austria

Trends in International Engineering Education Research
As the world has grown more intimately interconnected through the development of engineering transportation and communication networks, the trends in education research internationally have also begun to converge. Increasingly, colleges of engineering are focusing on student-centered, project-based, experiential, cooperative learning models. Moreover, team-based and interdisciplinary design and human-centered design have become increasingly common among engineering curricula globally. Finally, the enablement of inter-continental project teams spanning multiple universities through web resources, video conferencing, and short immersion experiences is another common theme. These innovations bode well for continuing to enculturate engineering students globally and for ensuring the continued cross fertilization of engineering curricula throughout the world. This presentation will highlight some of the most exemplary programs.
Presenter: Peter Kilpatrick
GEDC Chair, 2015–2017
McCloskey Dean of Engineering
University of Notre Dame
Notre Dame, Indiana, USA

The Role of IFEES in Promoting Engineering Education Worldwide
The International Federation of Engineering Education Societies (IFEES) has been created 10 years ago and, since then, has been growing in the number of members and reach. Almost 60 Engineering Education Associations from the five continents and several global companies are actively participating in our annual conferences and other activities that spread all over the year. IFEES also works with other organizations that serves specific communities, like the students, gathered in the Students Platform for Engineering Education Development (SPEED), and the deans, gathered in the Global Engineering Deans Council (GEDC). This presentation will describe our role in promoting Engineering Education worldwide.
Presenter: Uriel Cukierman
IFEES President, 2014–2016
Professor and Researcher
Universidad Tecnológica Nacional
Buenos Aires, Argentina

Upcoming Global Events, Awards and Collaborations Facilitated by IFEES and GEDC
Since the inception of IFEES in 2006 and the GEDC in 2008, the two global organizations have served as a catalyst and facilitator for events and collaborations promoting the evolution of engineering education around the world. In addition to the annual WEEF & GEDC 2016 Seoul conference (November 6-10th, 2016), Dr. Hoyer will also touch on several upcoming events in South Africa, Colombia, China and India. Additionally, Dr. Hoyer will provide details on the 2016 GEDC Airbus Diversity Award, which recognizes individuals who make significant and meaningful contributions to bringing diversity into engineering education around the world. The GEDC and Airbus Group will be accepting nominations for this award through June 30, 2016.
Presenter: Hans-Jürgen Hoyer
IFEES Secretary General
GEDC Executive Secretary
Milwaukee, Wisconsin, USA

The Coming of Age of SPEED: Battles and Conquests of the Student Voice in Engineering Education
The International Federation of Engineering Education Societies (IFEES) has been created 10 years ago and, since then, has been growing in the number of members and reach. Almost 60 Engineering Education Associations from the five continents and several global companies are actively participating in our annual conferences and other activities that spread all over the year. IFEES also works with other organizations that serves specific communities, like the students, gathered in the Students Platform for Engineering Education Development (SPEED), and the deans, gathered in the Global Engineering Deans Council (GEDC). This presentation will describe our role in promoting Engineering Education worldwide.
Presenters:
Avneet Hira
Vice President - Educational Content, SPEED
Graduate Student in the School of Engineering Education at Purdue University

Dhinesh Radhakrishnan
Chair, SPEED Global Student Forum
Graduate Student in the School of Engineering Education at Purdue University

5:30 p.m. – 6:30 p.m. Closing Reception and Poster Session
CONVENTION CENTER
ROOM 261

The Closing Reception and Poster Session is designed to provide attendees with the opportunity to network, dialog with the partner organizations and learn about selected international programs.

Note: The partnering organizations and the following presenters are invited to set up their displays for the Poster Session in Room: 261 from 3:00 PM to 5:15 PM

Best Practices of Engineering Education Internationalization in a Russian Top-20 University
Julia Ziyatdinova
Artem Bezrukov
Phillip Albert Sanger, Purdue University, West Lafayette
Petr Osipov

Cross Cultural diversity in Engineering Professionals—Russia, India, America
Julia Ziyatdinova
Artem Bezrukov
Phillip Albert Sanger, Purdue University, West Lafayette
Petr Osipov

Global Undergraduate Engineering Curriculum for the Future @ Prince Mohammad Bin Fahd University (PMU)
Kingdom of Saudi Arabia
Jamal Nayfeh, Dean of Engineering, Professor of Mechanical Engineering

VIRTUAL SESSIONS
Concurrent Virtual Sessions

10:15 a.m. – 12:00 p.m.

The Role of the Socio-Psychological Disciplines in The training of Engineers (KNRTU Experience)
Nailya Sh. Valeyeva, Kazan National Research Technological University
Roman V. Kupriyanov, Kazan National Research Technological University
Elvira R. Valeyeva, Kazan National Research Technological University

Establishing Partnerships for Global Service Learning in Engineering
Jeffrey R. Seay, University of Kentucky
John Christopher Higgins, University of Kentucky
Chandni A. Joshi, University of Kentucky
Sarah Frances Willett, University of Kentucky

A Comparison and Evaluation of Aeronautical Engineering Learning Outcomes Using an Airborne Flight Laboratory and a Flight Simulator Laboratory
Raymond Colin Lewis, University of New South Wales at the Australian Defence Force Academy
Matthew Garratt, University of New South Wales
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