2017 ASEE International Forum

Hyatt Regency Columbus
Columbus, Ohio
Wednesday, June 28, 2017

ASEE thanks Boeing for sponsoring the 2017 ASEE International Forum
WELCOME AND GREETINGS FROM ASEE

We welcome and thank the participants, speakers and partners to the 2017 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 2017 ASEE International Forum will be held June 28 in Columbus, Ohio. The event will feature plenary speakers from SEFI, IAOE and QAII. We are pleased to be able to host a virtual session once again for those unable to attend the forum in person. In all, the one-day Forum will consist of plenary presentations, six paper sessions arranged into two concurrent tracks, virtual presentations, and a final poster session held during the President’s Farewell Reception.

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 would also like to thank the Qingdao Academy of Intelligent Industries for their support of the Forum.

We look forward to hosting you in Columbus!

Howard Appelman  
Chair, International Forum Steering Committee

Catherine Skokan, Ph.D  
Vice President, External Affairs
PARTICIPATING ORGANIZATIONS

ASEE gratefully acknowledges the following societies for participating in the 2017 International Forum.

IAOE. SEFI

BRONZE-LEVEL SPONSOR

ASEE would like to thank Qingdao Academy of Intelligent Industries for their generous sponsorship of today’s event.

INTERNATIONAL FORUM STEERING COMMITTEE

Howard Appelman (Chair)
The Boeing Company

Vinod Lohani
Professor, Engineering Education
Director, Education & Global Initiatives, ICTAS
Virginia Tech, Blacksburg

Indira Nair
Professor and Vice Provost Emeritus
Carnegie Mellon University

Phillip Sanger
Professor, School of Engineering Technology
Purdue Polytechnic Institute

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Vice President, External Affairs
American Society for Engineering Education

Fei-Yue Wang
Vice President
Chinese Academy of Sciences

Ashok Agrawal (Staff)
Managing Director, Professional Services Director, External Affairs
American Society for Engineering Education
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”.
PARTNER ORGANIZATION PLENARY I
EUROPEAN SOCIETY FOR ENGINEERING EDUCATION (SEFI)

Mike Murphy is the Director of Digital Campus & Learning Transformation at Dublin Institute of Technology. In this role he is responsible for two strategic initiatives within Dublin Institute of Technology: developing a vibrant digital campus, and enabling a transformation in learning for all DIT students. Prior to this, in 2014 Mike took on the role of coordinating the merger planning of Dublin Institute of Technology with the Institute of Technology Tallaght and the Institute of Technology Blanchardstown, with the goal of creating the first technological university in Ireland. Mike joined Dublin Institute of Technology in 2002 as DIT Director and Dean of the Faculty of Engineering. In 2009 he was appointed Dean of the newly formed College of Engineering & Built Environment at Dublin Institute of Technology.

Mike holds PhD and MEng degrees in electrical engineering from Stevens Institute of Technology in the United States. Prior to that he graduated with an Honours Diploma in Electrical Engineering from Dublin Institute of Technology, and BSc (Eng) Honours Degree from Trinity College Dublin. He is a Fellow of Engineers Ireland and a Member of the Institute of Electrical and Electronics Engineers. He is President-Elect of the European Society for Engineering Education (SEFI) and is the Chair of the European Engineering Deans Council. Mike commenced his industry career with AT&T Bell Labs in New Jersey, and later with Bell Communications Research before returning to the academy.

LUNCH SPEAKER, PRESENTED BY BOEING

B. L. (Rama) Ramakrishna is the Director of NAE Grand Challenge Scholars Program. Until recently was an emeritus professor at Arizona State University (ASU), where he was on the faculty for more than 30 years. Most recently Dr. Ramakrishna was the Diane and Gary Tooker Professor at the School of Engineering for Matter, Transport, and Energy in the ASU Fulton Schools of Engineering. He launched the ASU GCSP in 2009 and led or co-led it until 2013, when he took a Jefferson Science Fellowship at the US State Department. In 2014 he returned to ASU, where he helped establish a Humanitarian Engineering Program. From 2001 to 2011 he was director of ASU’s NSF-sponsored Graduate STEM Fellows in K-12 Education (GK-12) Project, Down to Earth Science, whose goal was to bring cutting-edge research in the physical, life, and engineering sciences to K-12 teachers and students in order to strengthen the pipeline for recruiting highly motivated and well-prepared students to STEM careers. He has been recognized with fellowships from Germany and NATO for his expertise in international collaborations. He received his PhD from the Indian Institute of Technology, Madras, in 1982 and joined the ASU faculty in 1985 after postdoctoral work at the University of Zurich and Washington State University.
PARTNER ORGANIZATION PLENARY II
INTERNATIONAL ASSOCIATION OF ONLINE ENGINEERING (IAOE)

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” (IGIP).

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

Vinod K. Lohani is a Professor of Engineering Education and also serves as the Director of education and global initiatives at the Institute for Critical Technology and Applied Science (ICTAS) at Virginia Tech (VT). He is founding director of an interdisciplinary lab called the Learning Enhanced Watershed Assessment System (LEWAS) at VT. He received a Ph.D. in civil engineering from VT. His research interests are in the areas of computer-supported research and learning systems, hydrology, engineering education, and international collaboration. He has served as a PI or co-PI on 16 interdisciplinary research and curriculum reform projects, funded by the U.S. National Science Foundation. Currently, he leads an NSF/Research Experiences for Undergraduates (REU) Site and an NSF/Research Experiences for Teachers (RET) site on interdisciplinary water research. Also, he serves as a co-PI on two NSF/International Research Experiences for Students (IRES) projects. He has published over 85 papers in peer-reviewed journals and conferences.
Denis Gillet is currently a faculty member at the School of Engineering of the Swiss Federal Institute of Technology in Lausanne (EPFL), where he leads the Re-act multi-disciplinary research group. He was Associate Editor of the IEEE Transactions on Learning Technologies (TLT). He is also the Programme Chair and a Steering Committee Member of the Joint Summer School on Technology Enhanced Learning. During the academic year 2005-2006 he was on sabbatical leave as Visiting Scholar at the Faculty of Engineering, Chinese University of Hong Kong. Between 2011 and 2013 he was a Guest Professor at the School of Software Engineering, Tongji University, and an Advisor for their Smart City initiative. Denis Gillet is affiliated at EPFL with the Center for Digital Education and member of the EPFL Editorial Committee for MOOCs. Denis Gillet was the Technical Coordinator of the Go-Lab FP7 European Integrated Project (2012-2016). He is now the Deputy Coordinator of the Next-Lab H2020 European Project aiming at supporting the Next Generation Stakeholders and Next Level Ecosystem for CoLaborative Science Education with Online Labs.

Kalyan Ram B. holds a Bachelor degree in Electronics & Communication Engineering and a Masters in Embedded System Design and is currently pursuing Ph.D on Remote access and communication of Devices and Machines.

He is the co-founder of Electrono Solutions Pvt. Ltd. As the CEO of Electrono Solutions, Kalyan provides strategy and insights, drives innovations, defines organization’s business goals and ensures business development. With over 12 years of experience in the field of Control system design and Remote Engineering, Kalyan also heads the Engineering Design team at Electrono solutions. At Electrono Solutions Pvt Ltd, Kalyan along with his team is involved in developing Remote Engineering Solutions for Industries and Academic Institutions, control system design solutions for Defence and Aerospace, Industrial Automation solutions, Software, Hardware and System-in-loop simulations, IoT for Engineering applications and Research Infrastructure Management Solutions. Prior to starting Electrono Solutions, Kalyan worked with GE in the field of Control System Design for Locomotives and Marine sectors for about 5 years. He has designed and developed Hardware in the Loop (HITL) simulators to test Locomotive/Marine Electronic controller units using Matlab-Simulink / NI LabVIEW and associated Data acquisition systems.

Carlo Manfredini is one of the co-developers of EMONA TIMS along with Alfred Breznik. EMONA Instruments is the manufacturer of the EMONA TIMS range of Telecommunications laboratory teaching equipment. In his role as R & D Director within the team since 1988 he has overseen the emergence of remote access labs since the release of net*TIMS in 1999. net*TIMS is remote access telecommunications teaching equipment for remotely performing all wireless telecoms and signals & systems experiments required at undergraduate level. This equipment is being used in 15 countries around the world and helps users overcome the tyranny of distance, timetabling and inventory management. Recently, EMONA has pioneered and released a range of remote access “Analog & Digital Electronics” labs called “netCIRCUITlabs”. This versatile platform enables the delivery of many mainstream electronics lab experiments to many students simultaneously via a browser based interface. As well as R & D, Carlo has an interest in junior robotics coaching, reading, travel, art and surfing.
Fei-Yue Wang is Professor & Director of the National Key Laboratory of Management and Control for Complex Systems, CASIA, Chinese Academy of Sciences, and President of Qingdao Academy of Intelligent Industries. He received his Ph.D. from RPI, Troy, NY in 1990 and has been a researcher, educator, and practitioner of intelligent and complex systems for more than 30 years. He is a member of Sigma Xi and a Fellow of IEEE, INCOSE, IFAC, ASME, and AAAS. He has been awarded the National Prize in Natural Sciences of China, the Outstanding Scientist of ACM, IEEE ITS Outstanding Application and Research Awards, IEEE SMC Norbert Wiener Award. Prof. Wang was the Editor-in-Chief of IEEE Intelligent ITS Magazine, and IEEE Intelligent Systems, IEEE Transactions on ITS. He was the President of IEEE ITS Society, Chinese Association for Science and Technology (CAST, USA), and the American Zhu Kezhen Education Foundation. Since 2008, he is the Vice President and Secretary General of Chinese Association of Automation.

Abul K. M. Azad is a Professor with the Northern Illinois University, US. He is active with remote laboratory field and is the President of the Global Online Laboratory Consortium (GOLC) as well as the Vice-President of the International Association of Online Engineering (IAOE). The main focus of GOLC and IAOE is to promote the remote laboratory as well as the use web technology for engineering applications. Currently Dr. Azad is an Editor-in-Chief of the International Journal of Online Engineering. He is active with other professional organizations like- IEEE, ASEE, and CLAWAR Association. He also served as a program evaluator for the ABET and is active in evaluating research and development projects for various national and international funding agencies.
2017 ASEE INTERNATIONAL FORUM PROGRAM

7:00 a.m. – 5:00 p.m.  Registration Open
FRANKLIN A&B FOYER

7:15 a.m. – 7:45 a.m.  Continental Breakfast
FRANKLIN A&B FOYER

7:45 a.m. – 8:15 a.m.  Introduction and Welcome
FRANKLIN AB

Howard Appelman
Chair, International Forum Steering Committee

Catherine Skokan
Vice President, External Affairs

8:15 a.m. – 9:30 a.m.  Partner Organization Plenary I – SEFI
FRANKLIN AB

Broadening the Engineering Curriculum in Ireland

Presenter:
Mike Murphy
Vice President/President-Elect, SEFI

9:30 a.m. – 10:00 a.m.  Networking Break
FRANKLIN A&B FOYER

10:00 a.m. – 11:30 a.m.  Concurrent Paper Tracks 1 - Session I

- Courses I
FRANKLIN AB
Moderator: Catherine Skokan

- Curriculum I
UNION B
Moderator: Howard Appelman

- Skills Development
UNION A
Moderator: Phillip Sanger

Concurrent Paper Tracks Session I – Courses I
FRANKLIN AB

SCUPI Derby – A New Approach to “Introduction to Mechanical Design”
F.C. Lai, University of Oklahoma
Dong Liang, Sichuan University - Pittsburgh Institute
Al R. Evans, Sichuan University - Pittsburgh Institute
Collaborative Technological Development and Innovation Between UTRGV-ENGT, USA and ITM-CSE, Mexico: An Intelligent Closet Prototype
Immanuel Edinbarough, University of Texas, Rio Grande Valley
Adriana Olvera, University of Texas Rio Grande Valley
Anabel Pineda-Briseño, Tecnológico Nacional de México/Instituto Tecnológico de Matamoros

International Collaborative Dual MS degree program
Michael McInerney, Rose-Hulman Institute of Technology
Azad Siahmakoun, Rose-Hulman Institute of Technology
Wonjong Joo, Seoul National University of Science and Technology

Virtual Teams in Engineering – Global Practices
Ana Marcela Hernández de Menéndez, Tecnológico de Monterrey
Ruben Morales-Menendez, Tecnologico de Monterrey (ITESM)
Pedro Orta, Tecnologico de Monterrey (ITESM)

Concurrent Paper Tracks Session I – Curriculum I
UNION B

A Review of Engineering Education in China: History, Present, and Future
Xisong Dong, Qingdao Academy of Intelligent Industries
Xiwei Liu, 1. The State Key Laboratory of Management and Control for Complex Systems, Institution of Automation, Chinese Academy of Sciences; 2. Institute of Smart Education Systems, Qingdao Academy of Intelligent Industries

Identifying and Sharing Best Practices in International Higher Education Makerspaces
Vincent Wilczynski, Yale University
Malcolm N. Cooke, Case Western Reserve University

Preparation for ABET Accreditation at an Indian University – An ABET Team Chair’s Perspective
Amitabha Bandyopadhyay, State University of New York, Farmingdale

Teaching Engineering Ethics in Asia from Western Resources
N. Krishnamurthy, Self-employed

The Quality of Education and its Challenges in Developing Countries
Arul Kumaravelu, National Institute of Fashion Technology
E. S. M. Suresh, National Institute of Technical Teachers Training and Research

Concurrent Paper Tracks Session I – Skills Development
UNION A

Inspiring Interest in STEM Education Among Qatar’s Youth
Brady Creel, Texas A&M University at Qatar
Sandra Nite, Aggie STEM, Texas A&M University
IEEE Client Services Managers: Supporting Technical Careers, Promoting Effective Research, Building Global Institutional Partnerships
Michael S. Shapiro, IEEE.org

A Corporate-Academic Partnership to Deploy Game-Based Learning Around the World
Daniel Christe, Drexel University
Jay J. Bhatt, Drexel University (Eng. & Eng. Tech.)

Practitioner in Academia – What Should a Professor of the Practice Profile Be for an IT University?
Oksana Zhirosh, Innopolis University
Tanya Stanko, Innopolis University

11:30 a.m. – 12:45 p.m. Networking Lunch
Sponsored by The Boeing Company
FRANKLIN CD

B. L. (Rama) Ramakrishna
Director, NAE Grand Challenge Scholars Program

12:45 p.m. – 1:45 p.m. Partner Organization Plenary II – IAOE
FRANKLIN AB

Online Engineering Education as Global Challenge – Opportunities and Needs
Presenter: Michael Auer
President, IAOE

Inquiry Learning and 21st Century Skills for STEM Education at School
Presenter: Denis Gillet
EPFL Lausanne, Switzerland

Remote Laboratories - Facilitating Experiential Learning
Presenter: Kalyan Ram
Electrono Solutions Pvt. Ltd. Bangalore, India

1:45 p.m. – 2:45 p.m. Hands-On Virtual/Remote Lab Demonstrations
FRANKLIN AB

Remote Laboratories in Electrical Engineering Education, Austria
Michael Auer and team
Learning Enhanced Watershed Assessment System (LEWAS), Virginia Tech, USA
Vinod K. Lohani and team

“netCIRCUITlabs” from Emona Instruments, Australia
Carlo Manfredini and team

Remote Laboratory for Embedded Processor Programming, Northern Illinois University, USA
Abul Azad and team

2:45 p.m. – 3:00 p.m. Networking Break
FRANKLIN A&B FOYER

3:00 p.m. – 4:30 p.m. Concurrent Paper Tracks - Session II
• Courses II
   FRANKLIN AB
   Moderator: Phillip Sanger

• Curriculum II
   UNION B
   Moderator: Pritpal Singh

• Study Abroad
   UNION A
   Moderator: Vinod Lohani

Concurrent Paper Tracks Session II – Courses II
FRANKLIN AB

Cross Border Collaborative Learning through Capstone Engineering Projects
Immanuel Edinbarough, University of Texas, Rio Grande Valley
Adriana Olvera, University of Texas Rio Grande Valley

International Humanitarian Capstone Design Project Option: A Model for Success
Kevin Kochersberger, Virginia Polytechnic Institute and State University
Ashley R Taylor, Virginia Polytechnic Institute and State University
Christopher Kappes, Virginia Tech

Open Source in STEM Program for Effective Learning in Developing Nations
Simon Obeid, DeVry University, Orlando

Vertically Integrated Projects (VIP) Programs at International Institutions: Multidisciplinary Projects with Homes in Any Discipline
Edward J. Coyle, Georgia Institute of Technology
Randal T. Abler, Georgia Institute of Technology
Talis Juhna, Riga Technical University
Hale Kim, Inha University
Stephen Marshall, University of Strathclyde
Mauricio Pardo, Universidad del Norte
Julie Sonnenberg-Klein, Georgia Institute of Technology
Winston Spencer Percybrooks, Universidad del Norte

Concurrent Paper Tracks Session II – Curriculum II
UNION B

A New Framework of Science and Technology Innovation Education for K-12 in Qingdao, China
Xiwei Liu, The State Key Laboratory of Management and Control for Complex Systems, Institute of Automation, Chinese Academy of Sciences
Xiaoyan Gong, 1. The State Key Laboratory of Management and Control for Complex Systems, Automation Institution, Chinese Academy of Sciences; 2. Intelligent Education Institution, Qingdao Academy of Intelligent Industries
Fei-Yue Wang, The State Key Laboratory of Management and Control for Complex Systems, Institute of Automation, Chinese Academy of Sciences
Rui Sun, Qingdao Experimental High School
Yanqing Gao, Oregon Institute of Technology
Yu Zhang, Qingdao Experimental High School
Liehan Zhou, University of Oulu
Xiaofei Deng, Qingdao Experimental High School

Project Supervisors’ Views of a Group Based Project Exam for Engineering Students in a Problem-Based Learning Curriculum
Bettina Dahl, Aalborg University, Denmark

Kepler Tech Lab: Developing an Affordable Skills-Based Engineering Lab Course in Rwanda
QinQin Yu, University of California, Berkeley
Jakob Dahl, University of California, Berkeley
Alphonse Habyarimana, Kepler Tech Lab

Preliminary Results of an NSF Sponsored Cross Institutional Study for Assessing the Spectrum of International Undergraduate Engineering Educational Experiences and IDI Results of Short-Term Study Abroad (University of Rhode Island)
Sigrid Berka, University of Rhode Island
Anett Geithner, University of Rhode Island; DAAD
Eric Kaldor, University of Rhode Island

Investigation of Effect of Curriculum Change on Students’ Performance in Knowledge-Building and Knowledge-Integration Subjects
Randolph C. K. Leung, The Hong Kong Polytechnic University
Udaya Kahangamage, The Hong Kong Polytechnic University
Cheung Siu Lin, The Hong Kong Polytechnic University
Siu Lun Alan Kwok
Concurrent Paper Tracks Session II – Study Abroad
UNION A

Ancient Egypt: A Blend of Engineering/Architecture and History/Culture
Ashraf Ghaly, Union College

Betting on the Progress – Forging a Collaborative Relationship Between US and Cuban Engineering Institutions
Derek Guthrie Williamson, University of Alabama
Steven Jones, University of Alabama

Developing Successful Partnerships in Electrical and Information Engineering Education (EIE) with EU-programs
Anna Friesel, Technical University-Copenhagen
Jean-Marc Thiriet, Gipsa-lab, Univ. Grenoble Alpes
Anthony Edward Ward, University of York, England
Olivier Bonnaud, University of Rennes 1
Hamed Yahoui, Université de Lyon

The NAU/CQUPT 3+1 Program in Electrical Engineering
Phillip A Mlsna, Northern Arizona University
Fang Cheng, Chongqing University of Posts and Telecommunications
David R. Scott, Northern Arizona University
Jie Yang, Northern Arizona University
Guoquan Li, Chongqing University of Posts and Telecommunications
Xi Zhou, Northern Arizona University

Wastewater Treatment in Myanmar: A Multidisciplinary Learning Experience for Engineering and Science Students from Two Countries
Chun Kit Chui, University of Hong Kong
Hayden Kwok-Hay So, University of Hong Kong
Nyein Thwe Khaing, Dagon University

4:30 p.m. – 5:30 p.m.
Partner Organization Plenary III - QAI
FRANKLIN AB

From iSTREAM to iCDIOS: New IT for New Education of K-12 and Beyond

Presenter:
Fei-Yue Wang
President, Qingdao Academy of Intelligent Industries

6:00 p.m. – 7:00 p.m.
President's Farewell Reception and Poster Session
BATTELLE GRAND
COLUMBUS CONVENTION CENTER
THE FOLLOWING PRESENTERS ARE INVITED TO SET UP THEIR DISPLAYS FOR THE POSTER SESSION IN BATTELLE GRAND, COLUMBUS CONVENTION CENTER FROM 4:00 PM:

Capacity Building Through an e-Learning Environment to Create New Educational Opportunities in a Developing Country  
Jennifer R. Amos

Rising Sophomore Abroad Program at Virginia Tech  
Kirsten Davis  
Timothy Kinoshita  
David B. Knight

Student Migration from the CIS Countries to Russia and Problems of Intercultural Communication Formation in an International Student Environment  
Liudmila Alexandrovna Bukalerova  
Anzhela Viktorovna Dolzhikova  
Marina Nikolaevna Moseykina

Rose-Hulman’s Korean Summer School  
Michael McInerney  
Azad Siahmakoun  
Wonjong Joo

Analysis of a multi-national summer design experience  
Mark A. Ruegsegger  
Gang Ruan

Benefits and Multi-Cultural Learning in an International Research Training Group Between Germany and the U.S.  
Barbara Sabine Linke  
Benjamin Kirsch

IEEE Client Services Managers: Supporting Technical Careers, Promoting Effective Research, Building Global Institutional Partnerships  
Michael S. Shapiro

Kepler Tech Lab: Developing an Affordable Skills-Based Engineering Lab Course in Rwanda  
QinQin Yu  
Jakob Dahl  
Alphonse Habyarimana

SCUPI Derby – A New Approach to “Introduction to Mechanical Design”  
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Cross Border Collaborative Learning through Capstone Engineering Projects
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Inspiring Interest in STEM Education Among Qatar’s Youth
Brady Creel
Sandra Nite
Jowaher E. Almarri
Ziyad Shafik
Sahar Mari
Wadha A. Al-Thani

Teaching Engineering Ethics in Asia from Western Resources
N. Krishnamurthy

A New Framework of Science and Technology Innovation Education for K-12 in Qingdao, China
Xiwei Liu
Xiaoyan Gong
Fei-Yue Wang
Rui Sun
Yanqing Gao
Yu Zhang
Jiehan Zhou
Xiaofei Deng

VIRTUAL SESSIONS

The Role of Metacognitive Skills in Engineering Education
Elvira Valeeva
Roman V. Kupriyanov
Nailya Sh. Valeyeva
Galina Romanova

Elimination of Barriers for a Broader Use of Remote Experiments in Slovakia
Gabriel Bánesz
Alena Hašková
Danka Luká Ová
Best Practice: Streamlining the International Legal Process
Anna Gornovskaya
Anna Sukhraspberry

The Formation of Innovative Behavior Values in New Type High Schools – National Research Universities
Zulfiya Kadeeva, Kazan National Research Technological University
Raushaniia Zinurova, Kazan national research technological University

Broadening Participation in Engineering: U.S.-Trinidad-Anguilla Partnership
Monica Gray
Constance Loretta Lundy

IACEE Porto Declaration: A Global Challenge for Engineers
Alfredo Soeiro
Bente Nørgaard
Kim A. Scalzo

The Effect of Socio-Psychological Workshops on the Process of First-Year Students’ Adaptation
Roman V Kupriyanov
Galina Romanova
Nailiya Sh. Valeyeva
Dzhamilla Renatovna Nugmanova

Training the Specialists of Combined Engineering and Economic Profile at Russian Universities: Cluster Approach
Roman Golov
Valery V. Shilov
Sergey A. Silantiev

Special Aspects in Implementing the Project-Based Learning in Russian Universities
Vasiliy Grigoryevich Ivanov
Svetlana Barabanova
Phillip Albert Sanger
Maria Suntsova
Irina Pavlova

Research University as a Center of Internationally-Focused Training Innovative-Economy Engineers
Vasiliy Grigoryevich Ivanov
Mansur Galikhanov
Farida Tagirovna Shageeva
MEMBERSHIP WITH ASEE

ASEE membership provides your program and faculty opportunities to network with and learn from colleagues from the US and other institutions around the globe. You will gain access to high quality resources to improve and transform instruction at your institution.

NETWORK
Collaborate and learn from deans from around the world by joining the Engineering Deans Council and attend their annual meetings. Join the ASEE International Division for direct connection with faculty at US institution.

Attend ASEE’s Annual Conference, the ASEE International Forum and other meetings through the year where members interact with peers, gain knowledge of innovative teaching methods through professional development sessions, and learn from advances at other institutions.

LEARN
Gain access to ASEE’s data bank of statistics on US universities to use to benchmark programs versus your peers; access degree, enrollment, and research data. Gain access to publications and newsletters as well as years of archived research papers and presentations through the ASEE PEER repository.

TRANSFORM
Access ASEE publications, including the research-focused Journal of Engineering Education, practice-focused Advances in Engineering Education, and ASEE’s award-winning Prism magazine. Join other professionals to create research partnerships through US universities and industry.

Our capabilities make ASEE membership a benefit for you.

INDIVIDUAL MEMBERSHIP BENEFITS

PRISM, the society’s award-winning magazine
Journal of Engineering Education (4 quarterly issues)
Profiles of Engineering and Technology Colleges provides comprehensive and detailed information about each school’s programs, enrollment, faculty, and more
ASEE’s professional interest divisions which provide unlimited professional networking opportunities

Visit https://www.asee.org to learn more about joining.
THANK YOU TO OUR PRESENTING SPONSOR WHO HELPED MAKE TODAY’S EVENT POSSIBLE