



2017 Engineering Deans Institute (EDI)

Building the Future: People, Spaces and Beyond

The Biltmore, Coral Gables, FL
April 2-5, 2017

PROGRAM

SUNDAY, APRIL 2, 2017

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| 10:00 a.m. – 1:00 p.m. | EDI Registration
<i>Country Club Ballroom Foyer</i> |
| 10:15 a.m. – 12:15 p.m. | EDC Executive Board Meeting (Invitation Only)
<i>Bowman Room</i> |
| 1:00 p.m. – 2:00 p.m. | Data Collection Committee Meeting (Invitation Only)
<i>Tuttle Room</i> |
| 1:00 p.m. – 2:30 p.m. | New Deans' Forum
<i>Merrick Room</i> |

The New Deans' Forum is for deans who are new to their positions – and also deans who are new to ASEE. This interactive session will provide an opportunity for networking and making connections with others experiencing similar challenges and opportunities. Group discussions will be guided by veteran deans, who will facilitate conversations on key areas such as: budgeting and resource management, assessing and developing your own leadership team, creating and managing a useful strategic plan, managing conflict and interpersonal affairs, and finding time for advancement and development.

Moderators:

Larry Stauffer, *Dean of Engineering, University of Idaho*

Michael Georgiopoulos, *Dean of Engineering, University of Central Florida*

Facilitators:

Scott Ashford, *Dean of Engineering, Oregon State University*

Teresa Dahlberg, *Dean of Engineering, Syracuse University*

Molly Gribb, *Dean of Engineering, University of Wisconsin-Platteville*

MONDAY, APRIL 3, 2017

Sponsor display tables are available during Exhibit Breaks and Refreshment Breaks

7:30 a.m. – 5:00 p.m.

EDI Registration
Country Club Ballroom Foyer

7:30 a.m. – 8:00 a.m.

Breakfast
Country Club Ballroom

8:00 a.m. – 8:45 a.m.

Welcome and Keynote Address
Sponsored by University of Miami
Country Club Ballroom

Welcome by 2017 EDI Co-Chairs
Ranu Jung, *Interim Dean of the College of Engineering and Computing, Florida International University*
Robert H. Bishop, *Dean of Engineering, University of South Florida*

Keynote Speaker:
Rony Abovitz, *President and CEO, Magic Leap*

Tomorrow's Reality Today

Magic Leap is one of the most exciting startups in the nation and last year received the most venture funding of any company in Florida. Its founder and CEO, Rony Abovitz, BSME '94, MSBE '98, an alumnus of the University of Miami College of Engineering, will discuss why today's tech companies need engineering school graduates who can work across departments and across disciplines, and why he's decided to keep his company in South Florida.

8:45 a.m. – 9:00 a.m.

Exhibit Break
Danielson Gallery

9:00 a.m. – 9:30 a.m.

Initial Session: Natural Hazards Engineering Research Infrastructure (NHERI)
Country Club Ballroom

The session discussion will center on the role the NHERI national facilities play in safeguarding our communities against natural hazard disasters, features of the facilities, best practices, and how others can participate and avail of these facilities.

Moderator & Panelist:
Ranu Jung, *Interim Dean of the College of Engineering and Computing, Florida International University*

Panel Participants:
Stephen P. DeWeerth, *Dean of College of Engineering and Applied Science, Lehigh University*
Sharon L. Wood, *Dean of Cockrell School of Engineering, The University of Texas, Austin*

9:30 a.m. – 10:15 a.m.

University President Keynote Perspective:

Engineering in the 21st Century – Entrepreneurship, Diversity and the Future of Engineering

Country Club Ballroom

Keynote Speaker:

Mark B. Rosenberg, *President, Florida International University*

Diversity and entrepreneurship in the United States are inextricably linked. According to the 2007 U.S. Survey of Business Owners, nearly one out of every ten working immigrants is a business owner. This is a higher entrepreneurship rate than that of non-immigrants. Minority voices often bring new perspectives and fresh ideas to the larger society. The world of engineering and innovation is no exception to this maxim.

Racial, ethnic and gender minorities are also making inroads in the U.S. in terms of entrepreneurship and innovation, but more must be done to foster diversity in our field. As educators, it is our responsibility to play a role in supporting such diversity. President Rosenberg will present a Keynote perspective and discuss best practices for expanding existing efforts and establishing new programming that address the need to increase diversity in our workforce with the deans.

10:15 a.m. – 10:45 a.m.

Refreshment Break

Sponsored by Virginia Commonwealth University, Colorado School of Mines

Danielson Gallery

10:45 a.m. – 12:00 p.m.

2nd Session: The Search: Consideration of Unconscious Bias in Departmental Personnel Processes

Sponsored by University of Southern California

Country Club Ballroom

In this session, issues and dynamics of departmental processes are explored through “living case studies” portrayed by professional actors. By bringing to life dynamics related to the hiring, retention, and promotion of faculty and staff, attendees will have the opportunity to discuss the limits, responsibilities, and possibilities of a dean's influence on a department. Topics explored include the subtle role of gender perceptions in search processes, ideas of “fit,” and concrete strategies for influencing faculty committees.

Moderators:

Emily L. Allen, *Dean of Engineering, California State University, Los Angeles*

Yannis C. Yortsos, *Dean of Engineering, University of Southern California*

Speaker:

Jeffrey A. Steiger, *Artistic Director of The New Theater of Medicine and Clinical Instructor for Psychiatry, George Washington University School of Medicine*

12:00 p.m. – 1:15 p.m.

Luncheon and Keynote Presentation Sponsored by Dassault Systèmes
Country Club Ballroom

Speaker:

Xavier Fouger, *Senior Director, Global Academia Programs at Dassault Systèmes*

Solving problems or differential equations: from course to project centric learning

Many signals across the global engineering education ecosystem show an increasing adoption of project centric education. Well-articulated educational methodologies such as CDIO or PBL express this trend which not only drives more interdisciplinary learning but also naturally reflects the actual daily life of professional engineers. Project centric learning seamlessly imbeds the cultivation of soft/human skills expected on the workplace. In this context, computer based platforms that are deployed in industry to optimize collective project activities find a new relevance in educational context. The slight adaptation from an industry-grade project platform to a project based learning environment produces new opportunities to facilitate and encourage the transition to project centric learning and through the same move, brings employment relevant practices into the curriculum.

1:15 p.m. – 1:30 p.m.

Exhibit Break

Danielson Gallery

1:30 p.m. – 2:30 p.m.

3rd Session: P-12 Education

Country Club Ballroom

P-12 engineering education is an area of growing national interest, winning attention not only in the engineering community but within the general education community as well. The completion of the Next Generation Sciences Standards (NGSS) has provided a framework for states to incorporate concepts of engineering education throughout the P-12 educational landscape. In addition, the emergence of novel curricular and co-curricular experiences such as hackathons, competitions, and maker fairs has enabled educators to reach out to diverse communities and encourage their interest in future STEM careers. This session highlights those novel innovations in P-12 engineering education that involve curriculum, programs, policy, or processes that help us encourage the best minds to pursue engineering.

Moderator:

Darryll Pines, *Dean of Engineering, University of Maryland, College Park*

Panel Participants:

Nikole Collins-Puri, *CEO, Techbridge Girls*

Christine Cunningham, *Vice President, Museum of Science, Boston*

B.L. Ramakrishna, *Director, Grand Challenge Scholars Program Network, National Academy of Engineering*

2:30 p.m. – 3:45 p.m.

4th Session: Focus on the Americas

Country Club Ballroom

This panel will bring together deans of colleges of engineering from select universities from the Caribbean, Latin, and South America. The objectives for the session include, A. understanding different approaches to engineering education at graduate and undergraduate levels across the region and, B. the need for collaborative international effort to enhance engineering education, preparing engineers who can best address the grand challenges of engineering.

Moderator:

Louis Martin-Vega, *Dean of Engineering, North Carolina State University*

Panel Participants:

Cecilia A. Paredes Verduga, *Academic Vice Rector, Escuela Superior Politécnica del Litoral (Ecuador)*

Javier A. Páez Saavedra, *Dean of Engineering, Universidad del Norte (Colombia)*

Nilza G. Aples, *Dean of Engineering, University of Technology (Jamaica)*

Carlos R. Costa Posada, *President of the Colombian Engineering Deans Council, Dean of Engineering, La Salle University (Bogota, Colombia)*

3:45 p.m. – 4:00 p.m.

Refreshment Break

Sponsored by Virginia Commonwealth University, Colorado School of Mines

Danielson Gallery

4:00 p.m. – 5:15 p.m.

Cool Ideas – Lightning Round

Country Club Ballroom

Deans present their “cool” ideas. Each participant has four minutes to present something exciting about their program which can be helpful for fellow deans. Past presentations have included: innovative pedagogical methods, course topics, recruitment practices, freshmen bridge programs, methods to stimulate collaborative research, and working with advisory boards. This session is also for deans that have the new cool ideas but need collaborators to bring to fruition.

Moderators:

Larry Stauffer, *Dean of Engineering, University of Idaho*

Jeffrey Duerk, *Dean of Engineering, Case Western Reserve University*

Participants:

Scott Ashford, *Oregon State University*

Norman Tien, *University of Hong Kong*

Gregory Washington, *University of California, Irvine*

Molly M. Gribb, *University of Wisconsin-Platteville*

Emily L. Allen, *California State University, Los Angeles*

Fotis Sotiropoulos, *Stony Brook University*

David Ferro, *Weber State University*

Robert Kolvoord, *James Madison University*

Thomas N. Farris, *Rutgers University-New Brunswick*

James H. Garrett, *Carnegie Mellon University*

John R. English, *University of Arkansas*

Lakshmi N. Reddi, *New Mexico State University*

Ron Harichandran, *University of New Haven*

Jianmin Qu, *Tufts University*
Kevin L. Moore, *Colorado School of Mines*
Kenneth R. Lutchen, *Boston University*

4:30 p.m. – 5:30 p.m.

EDC Global Engineering Education Committee Meeting
Tuttle Room

5:30 p.m. – 7:00 p.m.

EDI Reception
Sponsored by Oregon State University; Texas A&M University; North Carolina State University; Arizona State University; MathWorks; National Instruments; University of Maryland; Elsevier; and Northrop Grumman
Country Club Terrace

Speaker:
Scott Ashford, *Dean of Engineering, Oregon State University*

7:00 p.m. – 9:00 p.m.

Women Deans Networking Dinner (off-site ticketed event)
Seasons 52
 Address: 321 Miracle Mile, Coral Gables, FL 33134

All are welcome to take this opportunity to network with women engineering deans over dinner. Advance purchase of tickets is required.

Organizer:
Cammy R. Abernathy, *Dean of Engineering, University of Florida*

TUESDAY, APRIL 4, 2017

Sponsor display tables are available during Exhibit Breaks and Refreshment Breaks

6:45 a.m. – 7:30 a.m.

EDC Public Policy Committee Meeting (Invitation Only)
Tuttle Room

8:30 a.m. – 5:00 p.m.

EDI Registration
Country Club Ballroom Foyer

7:30 a.m. – 8:15 a.m.

Breakfast and Keynote Address
Sponsored by University of Florida
Country Club Ballroom

Welcome by 2017 EDI Co-Chairs
Ranu Jung, *Interim Dean of the College of Engineering and Computing, Florida International University*
Robert H. Bishop, *Dean of Engineering, University of South Florida*

Speaker:

Jen Day Shaw, *Associate Vice President/Dean of Students, University of Florida*

Growing Crisis in Student Well Being

College students, particularly engineering majors, are increasingly overwhelmed by the rapid pace and numerous demands of college life. Thus, increased cases of mental health issues and threats to safety are of growing concern. Campus counseling and wellness centers are being stretched to capacity to meet the rising demand for student services. This presentation will discuss the issues of this growing problem and opportunities to improve students' personal, professional, and academic outcomes.

8:15 a.m. – 8:30 a.m.

Exhibit Break

Danielson Gallery

8:30 a.m. – 9:45 a.m.

5th Session: Future of Aerospace; US Commercial Space Enterprise

Country Club Ballroom

Aerospace and Defense (A&D) supports 1.7 million jobs, representing 2% of the nation's employment base and 13% of the nation's manufacturing employment base. It represents 1.8% of the total US GDP and produces high-paying jobs, with earners making an average of \$93K per year. The emerging commercial space sector is crucially important to the engineering and engineering education communities.

Moderators:

Robert H. Bishop, *Dean of Engineering, University of South Florida*

Maj Mirmirani, *Dean of Engineering, Embry-Riddle Aeronautical University*

Panel Participants:

Frank DiBello, *President, Space Florida*

Norman Augustine, *Former CEO and Chairman, Lockheed Martin*

Mike Cacheiro, *Vice President Operations Commercial Space, Lockheed Martin Space Systems*

9:45 a.m. – 10:00 a.m.

Refreshment Break Sponsored by Pearson

Danielson Gallery

10:00 a.m. – 11:15 a.m.

6th Session: The Philosophy and Practice of Academic Makerspaces

Country Club Ballroom

Academic Makerspaces offer new opportunities to students of all disciplines to engage in design and prototype development, and to experience project teamwork. Makerspaces come in a large variety of forms – from gathering places for students interested in discussing technology trends, to mini-production facilities with powerful machinery (CNC machines, waterjets, heavy-duty 3D printers). In this presentation we will review the major design considerations encountered in developing a new Makerspace – from the basic philosophy (Why do it? What are the principal aims? What is the role of a Makerspace in student education and experience?) – to a host of practical issues: space allocation and assignment, selection of machinery and infrastructure, access and use, management, safety, participation of industry, budgeting, and maintenance. We will include case studies demonstrating the academic and entrepreneurial benefits of industrial Makerspaces

within the engineering disciplines. Overall, we aim to provide attendees with information, insight, and assortment of pertinent questions that would help them in thinking about Makerspaces, and in supporting their own activities in Makerspace design, maintenance, and curricular integration.

Moderator & Panelist:

Moshe Kam, *Dean of Engineering, New Jersey Institute of Technology*

Panel Participants:

Vincent Wilczynski, *Deputy Dean of the Yale School of Engineering, James S. Tyler Director of the Center for Engineering Innovation & Design, Yale University*

Dan Brateris, *Director of Experiential Learning & ECET Program Coordinator, New Jersey Institute of Technology*

11:15 a.m. – 12:30 p.m.

EDC Business Meeting

Country Club Ballroom

12:30 p.m. – 1:45 p.m.

Lunch Table Talk

Dean-to-Dean: Building the Future through the NAE Grand Challenge Scholars Program

Sponsored by University of Pittsburgh, Swanson School of Engineering

Country Club Ballroom

This panel of National Academy of Engineering Grand Challenge Scholars Program Deans will discuss why they support the program, how they have been able to leverage the program and how it has brought value to their campus.

Moderator:

Jenna P. Carpenter, *Dean of Engineering, Campbell University*

Speakers:

Yannis Yortsos, *Dean of Engineering, University of Southern California*

Wayne Davis, *Dean of Engineering, University of Tennessee*

Michelle Sabick, *Dean of Engineering, Saint Louis University*

Hisham Hegab, *Dean of Engineering, Louisiana Tech University*

Alec Scranton, *Dean of Engineering, University of Iowa*

1:45 p.m. – 2:00 p.m.

Exhibit Break

Danielson Gallery

2:00 p.m. – 3:15 p.m.

7th Session: Health

Country Club Ballroom

This session will focus on opportunities for engaging engineering research and education in the advancement of health care, specifically focusing on manufacturing of health care products. Technologies ranging from bioprinted materials to orthopedic implants to neurological devices will be discussed.

Moderator:

Cammy Abernathy, *Dean of Engineering, University of Florida*

Keynote:

Dean Kamen, *CEO, DEKA*

Panel Participants:

Gary Miller, *Executive Vice President, Research and Development, Exactech, Inc.*
Karen Zaderej, *President and CEO, AxoGen, Inc.*

3:15 p.m. – 3:45 p.m.

Refreshment Break Sponsored by Pearson

Danielson Gallery

3:45 p.m. – 5:00 p.m.

8th Session: Innovation and Entrepreneurship

Country Club Ballroom

The session will discuss the rapid transformation of the innovation ecosystem and explore the challenges and opportunities for Miami and South Florida to become the innovation hub for the Americas.

Moderator:

Matt Haggman, *Program Director, Knight Foundation*

Panel Participants:

Rony Abovitz, *President and CEO, Magic Leap*

Manuel D. Medina, *Managing Partner, Medina Capital*

Natalia Martinez-Kalinina, *Miami General Manager, Cambridge Innovation Center*

Maurice R. Ferré, MD, *Executive Chairman, Insightec*

7:00 p.m. – 7:45 p.m.

Closing Reception

Center Terrace

8:00 p.m. – 9:30 p.m.

Closing Banquet

Sponsored by National Council of Examiners for Engineering and Surveying (NCEES)

Granada Ballroom

Introduction by

Ranu Jung, *Interim Dean of the College of Engineering and Computing, Florida International University*

Keynote Speaker:

Thomas P. Russell, *Deputy Assistant Secretary of the Army (Research and Technology) and Army Chief Scientist*

EDI 2017

WEDNESDAY, April 5, 2017

We are pleased to present to EDI attendees two events at the conclusion of EDI (you need to choose one event and register for it):

- **Tour to the Port of Miami**

(no additional fee)

Please note: This opportunity is open to the first 20 attendees.

To register, please log in to your ASEE account and in your registration for EDI conference choose the event "2017 EDI Tour to the Port of Miami" and add a ticket (if at that time the registration is still open based on availability). We will announce the details of the tour closer to the event.

Tour Details

Pickup time*: around 7:00 AM (we will announce exact time)

Tour duration: 60-90 min + transportation from/to the hotel

Description: This will be the bus tour. The tour would provide construction, engineering and operation information, and go through both Cargo and Cruise areas.

What to bring: Please bring your photo ID. **International guests should bring their passports.**

*The bus will pick up those who have registered for the tour at The Biltmore Hotel.

- **3-day Trip to Cuba (Wednesday through Friday)**

(additional fee will apply)

[Sign-up Now for the Havana, Cuba Post-EDI Excursion!](#)

Please follow the link – <http://www.cubaincentivetravelassociates.com/aseeedi/havana/> for more information.

Please note: Sign up is on a first come first served basis. **You can sign up only directly with the company** via the link, provided above.

