

2015 ASME International Mechanical Engineering Education Leadership Summit

March 11-15, 2015 Newport Beach, CA

- ❖ Engineering, Cloud Computing, and the Industrial Internet
- ❖ Small & Large Scale Industrial Applications of 3D/AM Technologies
- ❖ Sustainable & Energy-Efficient Manufacturing, Materials, and Infrastructure
- ❖ Advancing Design & Manufacturing Infrastructure in ME Programs
- ❖ NIST – Advanced Manufacturing Partnerships 2.0
- ❖ Corporate Support/Endowments for Professors of Practice
- ❖ Award presentations: ASME Edwin Church and Ben C. Sparks Medals
- ❖ ASME/ABET Preparedness Workshop
- ❖ New Department Head/Chair Reception & Discussion

We welcome your participation in the MEED 2015. This leadership summit follows in the tradition of earlier meetings bringing together the heads of Mechanical Engineering and related programs from a broad spectrum of institutions and programs to roll up their sleeves and discuss, debate and determine how to move forward on the opportunities, and challenges, facing Mechanical Engineering education today and in the future.

This year's program promises to cover some of the latest topics driving engineering education and industrial practice - big data, additive manufacturing, and sustainable and energy efficient manufacturing, materials and infrastructure. Please join us to help chart out how Mechanical Engineering education can address these exciting opportunities, and challenges, in our educational programs.



DAVID A. DORNFELD

Chair, Mechanical Engineering, University of California, Berkeley and Chair, 2015 ASME International Mechanical Engineering Education Summit

Dear Colleagues,

It is an honor and a pleasure for me to welcome you to the 2015 International ME Education Leadership Summit. This annual summit has become a wonderful occasion to bring colleague experts together to present and discuss most relevant topics in mechanical engineering education. At this summit, the primary focus is on manufacturing and excellent sessions are planned, thanks to the session organizers and speakers. Furthermore, luncheons and social events give department chairs and administrators excellent opportunities to exchange ideas and best practices on a range of topics, e.g., curriculum reform, faculty recruitment and evaluation, tenure and promotion, ABET accreditation preparation and updates.

Of course the summit is for you and we'll need your help to propose topics and volunteer to organize sessions for next year's summit. We appreciate it if you can place your recommendations on topics and suggestions for improvements in the suggestion box inside the plenary room.

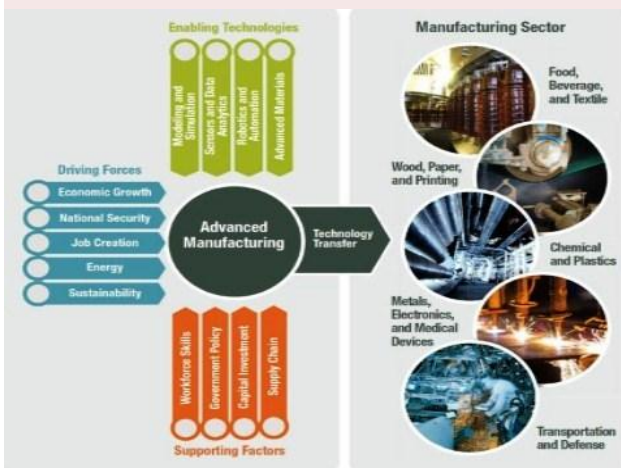


Thank you and best personal regards,

M. H. Hosni

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ASME Vice President, Education



ASME International Mechanical Engineering Education Leadership Summit

March 11-15, 2015, Hyatt Regency – Newport Beach, CA, USA

WEDNESDAY, March 11

Pre-Conference Workshop (*Garden Room 3*)

ASME/ABET Preparation Workshop

5:00 pm – 8:00 pm, Wednesday, March 11

7:30 am – Noon, Thursday, March 12

The workshop is expanded this year to include a [new working-dinner session](#) on Wednesday evening followed by a full-morning session with breakfast on Thursday.

This popular annual pre-conference ABET Preparation Workshop, conducted by experienced EAC team chairs, will take participants through the governing documents for ABET accreditation and provide a behind-the-scenes look at what the ME program evaluator and ABET evaluation team will be expecting to see during a visit. The presenters will discuss the most commonly cited shortcomings related to each policy, procedure or criterion.

We have expanded the workshop to allow considerably more time for discussion and sharing of best practices among participants.

Workshop Co-Leaders

Daisie Boettner, Head of Civil & Mechanical Engineering, United States Military Academy, West Point (ABET/EAC)

Christa Weisbrook, Director, Academic Programs, Office of Academic Affairs, University of Missouri System (ABET/EAC)

Special Guests

Joe Sussman, Managing Director Accreditation & Chief Information Officer, ABET

William Wepfer, Chair, Woodruff School of Mechanical Engineering Georgia Institute of Technology (ABET/EAC Executive Committee)

Patsy Brackin, Professor, Mechanical Engineering, Rose Hulman Institute (ABET/EAC)

Mohammad Hosni, Professor, Department of Mechanical & Nuclear Engineering, Kansas State University (ABET/EAC)

THURSDAY, March 12

Conference Opening (*Plaza Ballroom I & II*)

12:00 – 1:30p Opening Luncheon and Edwin F. Church Medal Presentation

2015 Edwin F Church Medal Honoree

William Wepfer, Head, Woodruff School of Mechanical Engineering, Georgia Institute of Technology; ASME Senior Vice President, Public Affairs & Outreach

Mohammad Hosni, Professor, Department of Mechanical & Nuclear Engineering, Kansas State University and ASME Vice President, Education

David Dornfeld, Will C. Hall Family Chair in Engineering, Professor of Mechanical Engineering, University of California-Berkeley, General Chair, 2015 ASME International Mechanical Engineering Education Leadership Summit

Ken Ball, Dean, College of Engineering, George Mason University, and Chair ASME Edwin F. Church, Medal Committee

1:30 – 2:30p Opening Keynote

“Engineering as a Force for the Global Good”

Al Pisano, Dean, Jacobs School of Engineering, University of California -San Diego, Distinguished Professor, MAE and ECE

2:30 – 5:00p Engineering, Cloud Computing, and the Industrial Internet
(*Plenary-1*)

The industrial internet, a term coined by General Electric, refers to the integration of complex physical machinery with networked sensors and software. The industrial Internet draws together fields such as machine learning, big data, the Internet of things and machine-to-machine communication to ingest data from machines, analyze it (often in real-time), and use it to adjust operations. This plenary discussion features the associated implications, opportunities and challenges for mechanical engineering education and industry practice.

Arvind Rangarajan, Senior Engineer, General Electric Global Research

Daniel Frayssinet, CEO, DP Technology

Stephen Schmid, Professor, Department of Aerospace & Mechanical Engineering, Notre Dame University and former ASME Swanson Fellow and Director, Research Partnerships at the Advanced Manufacturing National Program Office.

6:00 - 8:00p Networking Reception (*Oasis Court*)

Dinner on your own

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FRIDAY, March 13

(Plaza Ballroom I & II)

8:30- 9:00a **President's Council of Advisors on Science & Technology (PCAST) – Advanced Manufacturing Partnership 2.0 –**
(Briefing)

Gloria Wiens, ASME Foundation Swanson Fellow, Assistant Director for Research Partnerships, Advanced Manufacturing National Program Office (AMNPO), NIST

9:00 - 12:00 **Small & Large Scale Industrial Applications of 3D/AM Technologies**
(Plenary-2)

Not a day passes without another cool application or advancement in additive manufacturing. Kickstarter™ campaigns for 3D printers are launched regularly, and stories about people printing replacement limbs, medical implants, even living tissue to capitalize on the flexibility and unique capabilities of additive manufacturing. The hype for 3D printing is unprecedented even though the technology has been around for over two decades, but is it really going to disrupt mechanical engineering design and manufacturing as we know it? The short answer is - yes.

Anantha Krishnan, Associate Director for Engineering, Lawrence Livermore National Laboratory (LLNL)

Ed Tackett, Director, National Institute for Rapid Technologies (RapidTech), The Henry Samueli School of Engineering, University of California, Irvine

Yong Chen, Associate Professor Industrial and Systems Engineering, Viterbi School of Engineering, University of Southern California

12:00 – 1:30p **Ben C Sparks Medal Luncheon and Presentation**

[2015 Ben C Sparks Medal Honorees](#)

Carl D. Sorenson, Professor, Mechanical Engineering, Brigham Young University

Christopher Mattson, Associate Professor, Mechanical Engineering, Brigham Young University

David Dornfeld, Will C. Hall Family Chair in Engineering, Professor of Mechanical Engineering, University of California-Berkeley

Raju Dandu, Professor, Mechanical Engineering Technology, Kansas State University-Salina; Chair, ASME Ben C. Sparks Committee

1:30 – 4:00p **Sustainable & Energy-Efficient Manufacturing, Materials, and Infrastructure**
(Plenary-3)

What are the latest implications and leveraging resources for how and what we teach in manufacturing processes and design for sustainable manufacturability? Join us for a discussion of the new manufacturing technologies that reduce process steps, materials usage and intrinsically reduce the energy embedded in the manufacturing chain ; technologies that enable the manufacture of materials or components that increase recycling and recyclability; and how these attributes are embedded in ME programs.

David Dornfeld, Will C. Hall Family Chair in Engineering, Professor of Mechanical Engineering, University of California-Berkeley, General Chair, 2015 ASME International Mechanical Engineering Education Leadership Summit

John Sutherland, Professor and Fehsenfeld Family Head, Environmental and Ecological Engineering, Purdue University

Steve Skerlos, Arthur F. Thurnau Professor, Mechanical Engineering, University of Michigan

Jim Davis, Vice Provost for Information Technology & Chief Academic Technology Officer, UCLA

4:00- 4:30p **ABET Accreditation – Implications & Flexibilities - Open Discussion**

(Briefing)

Joseph Sussman, Managing Director Accreditation & Chief Information Officer, ABET

5:00 – 6:30p **Open Mic Reception (New (& Nearly New) Department Chairs** (Plaza Ballroom III)

Kon-Well Wang, Chair, Mechanical Engineering, University of Michigan; Chair, ASME MEDH ExCom

Dinner on your own

6:00 – 8:00p **ASME Committee on Engineering Technology Accreditation Meeting** (Garden Room 1)

Lynn “Skip” Stohlgren, Flight Specialties Corporation (ret); Chair, Committee on Engineering Technology Accreditation (CETA)

7:00 – 9:00p **ASME ME Department Heads Executive Committee Meeting** (Garden Room 3)

Kon-Well Wang, Chair, Mechanical Engineering, University of Michigan; Chair, ASME MEDH ExCom

SATURDAY, March 14

(Plaza Ballroom I & II)

8:30 – 9:00a The Industry-Endowed Professor Of Practice

(Briefing)

Matthew Mench, Chair, Department of Mechanical, Aerospace, and Biomedical Engineering (MABE), University of Tennessee-Knoxville

9:00 – 11:30a Advancing Design & Manufacturing Infrastructure in ME Programs

(Plenary-4)

As a strategic, practical and tactical matter how do we continue to evolve mechanical engineering programs not only in response to new advanced manufacturing technologies, but at the same time expand the design-build “making” aspects of the undergraduate ME curriculum. Competing priorities abound in curricular structures, budgets, faculty capabilities, physical resources and equipment. What are the best contributions from industry? What is the best role for ASME? How do department leaders advocate for and manage in the context of their colleges and universities?

Gregory Washington, Dean, The Henry Samueli School of Engineering, University of California, Irvine

Noel Perkins, Associate Chair for Facilities and Planning, Mechanical Engineering, University of Michigan

Diann Brei, Associate Chair for Undergraduate Education, Mechanical Engineering, and Director of ISD Design Science Program, University of Michigan

William Wepfer, Chair, ABET Engineering Accreditation Commission and Head, Woodruff School of Mechanical Engineering, Georgia Institute of Technology

11:30 – 12:00p Conference Conclusion and Preview of the 2016 Summit

David Dornfeld, Will C. Hall Family Chair in Engineering, Professor of Mechanical Engineering, University of California-Berkeley, General Chair, 2015 ASME International Mechanical Engineering Education Leadership Summit

Mohammad Hosni, Professor, Department of Mechanical & Nuclear Engineering, Kansas State University & ASME Vice President, Education

William Predebon, Chair, Department of Mechanical Engineering & Engineering Mechanics, Michigan Technological University and Vice President-elect, ASME Engineering Education

12:30 – 4:30p ASME Board on Education Meeting

(Patio Room)

Mohammad Hosni, Professor, Department of Mechanical & Nuclear Engineering, Kansas State University & ASME Vice President, Education

William Predebon, Chair, Department of Mechanical Engineering & Engineering Mechanics, Michigan Technological University and Vice President-elect, ASME Engineering Education



1107 Jamboree Road
Newport Beach, CA 92660

<https://www.asme.org/events/meed>

