Materials Science Undergraduate Education Conference 2019  
Penn State, University Park  
September 9-11, 2019

“The Enrollment Floodgates Are Open – Best Practices in Materials Science and Engineering Undergraduate Education for Rising Enrollments”

Day 1 – Sept. 9

7:15 a.m.  Breakfast/Pick up registration packets
8:15 a.m.  Welcome from Dean Lee Kump, Penn State College of Earth and Mineral Sciences
8:30 a.m.  Susan Sinnott (Penn State): Overview of workshop and objectives
9:00 a.m.  Dave Bahr (Purdue): Perspective within a rapidly growing student body
9:30 a.m.  Amy Moll (Boise State): Perspective from a growing MatSE department
10:00 a.m. Break
10:15 a.m. Dean Janet Callahan (Michigan Technological University): Materials science and engineering—it's unique
10:45 a.m. Panel on industry perspective: Dawne Moffatt-Fairbanks (Corning), Ed Sobota (TSI Titanium), Erik Lord (Blue Origin), Lazo Trkulja (ArcelorMittal USA)
12:00 p.m. Lunch
1:00 p.m.  Isabel Lloyd (Maryland): Impact on graduate recruiting and enrollment
1:30 p.m.  Michele Manual (Florida): Managing M.S. program populations
2:00 p.m.  Michael Falk (Johns Hopkins): Materials science and engineering and computing education
2:30 p.m.  Break
3:00 p.m.  Matt Begley and Victoria Christensen (UCSB): Integrating student and instructor perspectives to improve material retention
3:30 p.m.  Scott McCormack (UIUC/PCSA ACerS): Engaging and exciting next generation leaders
4:00 p.m.  Panel on national laboratory perspective: Kathy Wahl (Naval Research Laboratory), James Warren (NIST), Charles Ward (AFRL), Peter Green (NREL)
5:15 p.m.  Adjourn
5:30 p.m.  Reception—Steidle Atrium
6:00 p.m.  Optional tours of Steidle Building
6:30 p.m.  Dinner (on your own)
Day 2 – Sept. 10

7:15 a.m.  Breakfast
8:00 a.m.  Angus Rockett (Colorado School of Mines): Senior design in increasingly large materials programs
8:30 a.m.  Jessica TerBush (UIUC): Managing laboratories in times of enrollment growth
9:00 a.m.  Thomas Staley and Christine Burgoyne (Virginia Tech): Integrating communication and lab work into a growing undergraduate materials science and education curriculum
9:30 a.m.  Mary Lynn Realff (Georgia Tech): GT effective team dynamics initiative: changing the way teams work
10:00 a.m.  Break
10:15 a.m.  Michael Fitzsimmons (MRS): The Materials Research Society—Your partner for career advancement
10:45 a.m.  Panel on the government agency perspective: Lynnette Madsen (NSF), Julie Christodoulou (ONR), Linda Horton (DOE)
12:00 p.m.  Lunch
1:00 p.m.  Vanessa Chan (UPenn): Preparing materials science and education students for the real world
1:30 p.m.  Michael Williams (Clark Atlanta): African American participation in STEM: The leaky pipeline
2:00 p.m.  Panel on diversity, inclusion, access and affordability: Allen Kimel (Penn State), Viola Acoff (University of Alabama)
3:15 p.m.  Break
3:30 p.m.  Marcus Young (North Texas): Connecting materials science and engineering undergraduate education with other majors
4:00 p.m.  Julie Schoenung (UC-Irvine): Incorporating sustainability into materials science and engineering curricula
4:30 p.m.  Ian Nettleship (Pittsburgh): The value of engineering for humanity and service learning to undergraduate materials science and engineering education
5:00 p.m.  Mark Losego (Georgia Tech): The materials innovation and learning laboratory: A new paradigm in peer-to-peer experimental learning for materials science
5:30 p.m.  Adjourn
5:45 p.m.  Reception in the Millennium Science Complex
6:15 p.m.  Optional tours of Millennium Science Complex
6:45 p.m.  Clive Randall (Penn State): The Materials Research Institute: Daring new discoveries across scientific frontiers
7:30 p.m.  Dinner (on your own)
Day 3 – Sept. 11

7:15 AM  Breakfast

8:00 AM  Pawel Keblinski (RPI): Perspective from private institutions

8:30 AM  Orla Wilson (Johns Hopkins): Impact of the evolution of specialized research topics in materials science and engineering on the undergraduate curriculum over the coming decade

9:00 AM  Hatem Zurob (McMaster): Outlook from Canada

9:30 AM  Gregory Hilmas (Missouri University of Science & Technology): How Missouri S&T is managing our ABET accredited B.S. programs in Ceramic Engineering and Metallurgical Engineering, and where our students are going

10:00 AM  Break

10:15 AM  Ibrahim Karaman (Texas A&M): Challenges and rewards associated with starting a new materials science and engineering department

10:45 AM  J.R. Scully and J.M. Fitz-Gerald (University of Virginia): Developing an ABET accredited B.S. degree in materials science and engineering at the University of Virginia

11:30 AM  Susan Sinnott (Penn State): Summary and next steps

11:45 AM  Adjourn