



Graphics Courtesy of
Tufts University and Hope College



Pre-College Engineering Education

1:00 PM to 2:30 PM May 25, 2016

Sponsored by House Manufacturing Caucus and Maker Caucus

Room B-318 Rayburn House Office Building

Space is limited; [Please register here](#)

- 1:00 PM Welcome and Opening Remarks
Said Jahanmir, ASME Science and Engineering Policy Fellow
Office of Congressman Tim Ryan
- 1:05 PM Remarks by Members of the Manufacturing Caucus and Maker Caucus (invited)
Congressman Tim Ryan, Congressman Tom Reed, Congressman Mark Takano,
Congressman Steve Stivers, Congressman Mick Mulvaney
- 1:20 PM E in STEM Education
James Brown, STEM Education Coalition
- 1:30 PM Developing K-12 Engineering Curriculum through Public Private Partnerships
Chris Rogers, Tufts University, Center for Engineering Education and Outreach
- 1:40 PM Impact of Formal and Informal Engineering Education for All Students
Susan Ipri Brown, Hope College, Center for Exploratory Learning
- 1:50 PM Teaching High School Engineering
Teresa Sappington, Lamar County Center for Technical Education
Albert Einstein Distinguished Educator Fellow, Office of Congressman Mark Takano
- 2:00 PM Q&A
- 2:30 PM Adjourn

**House Manufacturing Caucus
House Maker Caucus**

James Brown is the Executive Director of the STEM Education Coalition, an alliance of more than 600 business, professional, and education organizations, that works to raise awareness in Congress, the Administration, and other organizations about the critical role that STEM education plays in enabling the U.S. to remain the economic and technological leader of the global marketplace of the 21st century. Prior to joining the Coalition, he was Assistant Director for Advocacy at the American Chemical Society. A nuclear engineer by training, he previously worked as a Legislative Aide for Rep. Doc Hastings of Washington, was Director of Policy and Development at the Consumer Energy Council of America, and began his career as an engineer with Newport News Shipbuilding, working on aircraft carrier construction. He received a B.S. from the University of New Mexico and an M.S. from Penn State, both in nuclear engineering. He also holds an MBA from George Washington University.

Chris Rogers recently retired as the Director of the Center for Engineering Education and Outreach at Tufts University and now is the Chair of the Mechanical Engineering Department. The Center is dedicated toward understanding the Learning Sciences (as applied to engineering), and then using those understandings to develop new tools for the classroom. They team with industry to put these products in classrooms and then work with teachers through their global conference circuit to better understand the successes and issues of these new innovations. Their most successful product was ROBOLAB, a joint effort between LEGO Education, National Instruments, and Tufts that went into over 50,000 schools in 15 different languages. Chris has been invited to speak on K-college engineering education in Singapore, Hong Kong, Japan, Australia, New Zealand, Denmark, Sweden, Norway, Luxembourg, Switzerland, Russia, the UK, and in the US. He was awarded the Carnegie Professor of the Year in Massachusetts in 1998. He received the 2003 NSF Director's Distinguished Teaching Scholar Award for excellence in both teaching and research. He received his B.S., M.S. and Ph.D. degrees from Stanford University.

Susan Ipri Brown is the Director of the Center for Exploratory Learning and a member of the Engineering Department faculty at Hope College in Holland, Michigan. Prior to coming to Hope, Susan was Associate Director of the Office of STEM Education Partnerships at Northwestern University where she directed teacher professional development programs, grant writing, and new program development for outreach with other area organizations. Susan is active in the American Society of Mechanical Engineering most recently serving as Vice President for Global Outreach and holding several previous leadership positions and a fellowship in Washington DC. She has also held positions with the Michigan State Legislature, Delphi Automotive, and several North Carolina school districts. Susan is active in the community serving as a FIRST Lego League coach, and Boy Scout/Girl Scout volunteer. Susan received her BSE in Mechanical and Aerospace Engineering from Princeton University, her MS in Mechanical Engineering from MIT and her secondary teaching certification from Appalachian State University.

Teresa Sappington teaches high school engineering at the Lamar County Center for Technical Education (LCCTE) in Purvis, Mississippi. Teresa is serving her fellowship in the US House of Representatives in the Office of Mark Takano (California 41st District) and in the Congressional Maker Caucus. She taught 3D Computer Aided Design (CAD) and VEX robotics and also mentored VEX robotics teams. She previously taught physics, Chemistry, Engineering, and Research at Oak Grove High School in Hattiesburg, Mississippi. While at Oak Grove she spearheaded the addition of Introduction to Engineering into the school's curriculum and mentored a BEST (Boosting Engineering Science and Technology) Robotics team. Teresa was formally the Outreach Coordinator for the College of Engineering at Mississippi State University (MSU). Teresa earned a Masters in Science Education and a Bachelors in Chemistry-Physics Education from Mississippi State University. Sappington achieved National Board Certification in 2008.