

*The National Academies of*  
**SCIENCES • ENGINEERING • MEDICINE**

Roundtable on Systemic Change in Undergraduate STEM Education

**Workshop on the Future of Undergraduate STEM Education**

September 12-13, 2019

500 Fifth St NW, Washington, DC

Keck 100

Public Agenda

*Meeting Goals:*

- Solicit input and advice on current roundtable work to improve teaching evaluation and evidence-based instruction.
- Learn more about trends impacting higher education and reflect on how we can incorporate these ideas into future roundtable plans

- 1:00 pm      **Welcome and Overview of Roundtable Meeting**  
*Mark Rosenberg and Ann Austin, Co-Chairs*
- 1:15          **Transforming Teaching Evaluation**  
**Improving recognition and evaluation of science teaching in higher ed**  
*Emily Miller, AAU*  
*Moderator: Noah Finkelstein, CU Boulder*
- Panel Discussion on Teaching Evaluation**
  - How will the ideas presented above be received on campus?
  - How do they fit with ongoing conversations nationally or on campus?
  - What role can the roundtable play?

Commentators: *Annette Parker, South Central College*  
*Chris Rasmussen, San Diego State University*  
*Mica Estrada, UCSF*  
*Moderator: Noah Finkelstein, CU Boulder*
- 2:15          **Questions, Discussion, and Commentary from the larger group**  
*Moderator: Noah Finkelstein, CU Boulder*
- 2:30          **Closing Remarks on Teaching Evaluation**  
*Ann Austin and Mark Rosenberg*
- 2:45          Break
- 3:00          **Presentation on Evidence-based Teaching: Change Agents acting on and off campus**  
*Jim Swartz, Grinnell College*  
*Cassandra Horii, Caltech*  
*Kacy Redd, APLU*  
*Moderator: Mark Rosenberg*

- 3:20 **Q&A**
- 3:30 **Panel on Scaling Evidence-Based Teaching: Perspectives from Disciplinary Societies**
- What does your society do to support evidence-based instruction?
  - How could the roundtable help advance evidence-based instruction?
- Amy Chang, American Society for Microbiology*  
*Ashley Donovan, American Chemical Society*  
*Bob Hillborn, American Association of Physics Teachers*  
*Aisha Lawrey, American Society for Mechanical Engineering*  
*Moderator: Cassandra Horii*
- 4:10 **Break Out Groups on Disciplinary Societies and Higher Education**
- What topics in undergraduate STEM education are of most interest to disciplinary societies?
  - How can the roundtable connect and support societies' work in education?
- 5:00 **Report back from Break Out Groups**
- 5:20 **Wrap Up and Plans for Tomorrow**  
*Mark Rosenberg*
- 5:30 **Hors D'oeuvres Reception**

**Friday, September 13th**

- 9:00 **Welcome, Day 1 Overview, and Preview of Day 2**  
*Ann Austin*
- 9:15 **Artificial Intelligence and Higher Education**
- How does/will AI affect how students learn? how faculty teach? and what students need to be prepared for the workforce?
- Andreas Oranje, General Manager, ETS*  
*Moderator: Mark Rosenberg*
- 9:35 **Q&A**
- 9:50 **International Students in Higher Education**
- What are the critical issues the roundtable should attend to in order to help the system of higher education provide quality learning experiences to all students?
- Sharon Fries-Britt, Department of Counseling, Higher Education, and Special Education, University of Maryland*

*Jenny Lee, Center for the Study of Higher Education, University of Arizona*  
*Moderator: Ann Austin*

10:15 Q&A

10:30 **Break**

10:45 **Workforce Preparation in a time of Globalization and Technological Change**

- How are workforce needs changing? What role can the roundtable play in helping higher ed navigate these changes and helping them to provide appropriate undergraduate STEM education to all students?

*Allyson Knox, Senior Director of Education and Policy Programs, Microsoft*

*Grace Diana, Policy Advisor for Workforce Development and Special Assistant White House Office of Science and Technology Policy*

*Erik Noble, Senior Policy Advisor at the White House Office of Science and Technology Policy*

*Dorn Carranza, Innovation & Industrial Partnerships, VentureWell*

*Moderator: Susan Singer*

11:15 Q&A

12:00pm **Lunch**

1:00 **Break out Groups on incorporating these new perspectives into roundtable work group plans**

(All participants will join one of these three groups for this session)

- Meeting Students Where They Are *Ann Gates*
- Systemic Change in Higher Education *Erin Dolan*
- Preparing the Future Workforce *Susan Singer*

2:30 **Reporting Back from Small Groups**

*Moderator: Mark Rosenberg*

2:45 **Closing remarks**

*Mark Rosenberg and Ann Austin*

3:00 **Adjourn**