

THE WORLD COMES HERE.  
**TMS2025**  
154<sup>th</sup> Annual Meeting & Exhibition



**March 23–27, 2025**  
MGM Grand Las Vegas  
Hotel & Casino  
Las Vegas, Nevada, USA  
#TMSAnnualMeeting



## SUBMIT AN ABSTRACT FOR THE FOLLOWING TMS2025 SYMPOSIUM:

### SPECIAL TOPICS

## Preparing Undergraduate and Graduate Students - And the Faculty Who Prepare Them - For Materials Careers (A Symposium Held in the Memory and Honor of Elizabeth Judson)

The Elizabeth Judson Memorial symposium was first held in 2011 to help academic engineering program learn about ABET and prepare for ABET accreditation evaluation visits but has evolved to include other aspects of education.

The materials community is responsible for both pushing the understanding of the structure-processing-properties paradigm and producing a workforce ready to generate technological change in future generations. This symposium is dedicated to understanding and improving how we prepare students (and the faculty who prepare them) for materials careers. Talks are solicited from both educational researchers and practitioners taking part in iterative cycles of intervention and assessment so that the community can learn from their pioneering approaches and findings. In addition, speakers are expected to highlight how the community is evolving to external forces such as the recent emergence of ChaptGPT. Since a robust workforce needs participants at a range of educational levels, this symposium will highlight innovations in undergraduate, graduate and faculty programs within the field of materials science and engineering. Special attention will be given to new pedagogical approaches that engage undergraduate and graduate students in materials science and engineering fields. This symposium will also provide a forum for changes in ABET accreditation criteria and processes.

Abstract submissions are encouraged for the following topics:

- Changes in ABET accreditation criteria and processes
- Assessment, reflection, and innovation related to accreditation of graduate programs
- Professional formation of materials engineers through curricular or extracurricular design.
- Broadening and refining of materials science curricula to meet evolving workforce needs and competencies.
- Impact of intention and intentional curriculum evolution on student learning. Talks encouraged from programs assessing the lasting impacts of the COVID-19 pandemic on students and institutions
- Incorporation of artificial intelligence tools into higher education and their impact on student and faculty short-term and long-term performance
- Influence of course mode (in-person, hybrid, virtual) on student short term and long-term performance
- Design, implementation, and outcomes of outreach activities that increase the diversity of students choosing to pursue undergraduate and graduate degrees in materials engineering by reaching students from underrepresented groups or those with financial need
- Cultivating an educational environment that fosters diversity, equity, justice, and inclusion.

- Influence of faculty professional development on student educational experiences
- Supporting early-, mid- and late-career faculty in the classroom
- Successful partnerships with high school or community college partners that strengthen matriculation of students into the materials engineering field
- Resilience and vitality of students during their matriculation including training for mental

Organizers envision that speakers will include program directors, master teachers, and grant recipients of awards such as the National Science Foundation CAREER, IUSE, ADVANCE, RET, REU, NRT, IGE, etc.

#### ORGANIZERS

**Jeffrey Fergus**, Auburn University; **Alison Polasik**, Campbell University; **Marian Kennedy**, Clemson University; **Jennifer Carter**, Case Western Reserve University

#### SYMPOSIUM SPONSORS

TMS Education Committee

[www.tms.org/TMS2025](http://www.tms.org/TMS2025)

### QUESTIONS?

Contact [programming@tms.org](mailto:programming@tms.org)