

# HIGHLIGHTS FROM THE FOURTH DIVERSITY SUMMIT: NEW LOCATION, NEW TOPICS

Lynne Robinson and Kelly Zappas



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—Summit Attendee



Clarissa Yablinsky, Los Alamos National Laboratory, led a personal and interactive Q&A session with Viola L. Acoff, University of Alabama, during the all-conference opening plenary session.

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Shared as a written comment in the follow up survey to the Fourth Summit on Diversity in the Minerals, Metals, and Materials Professions (DMMM4), this perspective reflected a common theme expressed throughout the two-day summit, co-located with the TMS 2022 Annual Meeting & Exhibition (TMS2022). Building on the work accomplished in the previous three DMMM Summits, the 2022 iteration gave attendees the opportunity to engage in important discussions with speakers, panelists, and each other on achieving true inclusion in the workplace.

Holding a DMMM Summit concurrent with a TMS annual meeting was a new twist on this signature TMS program, which had been previously organized as a standalone specialty conference. Originally slated to take place in conjunction with TMS2021, DMMM4 was included as part of annual meeting registration to provide access to members who would not typically be funded to travel to a non-technical meeting. As with everything in life, these plans changed in the wake of the COVID-19 pandemic.



Attendees started DMMM4 off with small group discussions on topics such as outreach, overcoming anxiety, accessibility, and more at the Fresh Coffee, Fresh Ideas: Diversity and Inclusion Breakfast.



Neurodiversity was a new topic explored at DMMM4, starting with an overview offered by Lawrence Fung (inset), Stanford Neurodiversity Project, as the closing all-conference plenary keynote speaker. On right: Summit attendees at the Celebrate Diversity Luncheon on Wednesday afternoon, before Fung's presentation.

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The DMMM4 Organizing Committee decided to postpone the summit when TMS2021 was pivoted to a virtual meeting to preserve what was considered the heart of the event—in-person networking, rich small group discussions, meaningful exchanges with panelists, and supportive, informal conversations.

Many DMMM4 survey respondents indicated that the summit was worth the wait, with 54% giving it an overall rating of "excellent" and 36% rating it "good." The survey also revealed strong support for continuing to co-locate the DMMM summit series with the TMS annual meeting, with 48% of survey respondents indicating a preference for this. As one attendee commented in the survey, "Co-locating with TMS2022 was excellent for the potential for broadening participation and should be considered for future events." Five percent of the respondents favored going back to a standalone conference.

Of the 29% indicating "Other" options, most comments provided insights into how future summits co-located at the TMS annual meeting could be improved to facilitate the ability of annual meeting attendees to participate in summit programming between technical session commitments. These suggestions are being carefully considered as a new DMMM Organizing Committee comes together to plan the fifth summit.

Beyond experimenting with the annual meeting co-location, DMMM4 introduced a new topic in the DMMM series—engaging those with physical, cognitive, or sensory challenges. This programming focus was developed in response to a 2018 STEM Inclusion Study supported by the National Science Foundation revealing that 16% of TMS members identified as being differently abled and reporting more negative workplace experiences than respondents who did not identify as having these challenges. To provide a foundation for deeper exploration of this issue, the closing plenary session featured the keynote, "Maximizing the Potential of Neurodiversity in the Employment and Educational Settings," by Lawrence Fung, Director, Stanford Neurodiversity Project. (For an overview of the concepts shared by Fung, read "Neurodiversity: An Invisible Strength?" published in the September 2022 *JOM: The Magazine*.)

Another variation on previous summit programs was devoting the All-Summit Opening Keynote exclusively to sharing the personal and professional journeys of well-known TMS colleagues as leaders of change in the diversity, equity, and inclusion space. This resulted in some of the most memorable moments in the history of the summit series.



Viola L. Acoff (inset), The University of Alabama, kicked off the summit by sharing her inspiring personal story of her remarkable life and career during the opening keynote session.

### Viola L. Acoff Keynote Opens Dialogue

As the lead speaker at the DMMM4 Opening Keynote session, Viola L. Acoff shared her powerful “origin story” with the audience. It began with her childhood days in Bessemer, Alabama (yes, named after the Bessemer steel process). It continued with her introduction to engineering at the age of 10 when the first of her sisters became an engineering major. (Ultimately, five of the seven daughters in her family majored in engineering.) And it intensified when, during her own undergraduate years in engineering, she read an article that said less than 0.5% of all Ph.D. degrees awarded in engineering went to African Americans. She looked around at her fellow students, taking classes and doing research just like she was, and thought, “I can do this.”

So Acoff earned her Ph.D. and secured a position at The University of Alabama.

“When I was hired as a tenure-track assistant professor at The University of Alabama’s College of Engineering in 1994, I was the first woman hired in the Department of Metallurgical and Materials Engineering. I was also the first Black tenure-track female faculty member hired in the College at that time,” she said. “There were only about nine or ten women on the entire faculty of the College of Engineering and over half of us had been hired just over a three-year period.”

Because of her unique position, she encountered challenges to her authority from students who didn’t know how they should address her because she didn’t look like the other professors they had known. She also once received an anonymous letter—which she shared with summit attendees—that let her know, in explicit and

violent terms, that she didn’t belong and should not be teaching at the school.

It was a difficult time, and Acoff considered leaving Alabama for an HBCU (Historically Black Colleges and Universities), but there was one thing that stopped her. She was filling in for a colleague when a Black female student from that class, a graduating senior, came to Acoff and told her that she was the first Black faculty member the student had encountered in her entire four years at the university.

“We need you here,” the girl said.

“At that moment, I had confirmation that I was on the correct path,” said Acoff. “I realized that I was in a perfect place to help students from groups traditionally underrepresented in our field to navigate the road to equity and inclusion.”

So Acoff stayed. She built a career at the University of Alabama. And she mentored other young Black and female students to build their engineering careers.

“I think my most important accomplishment has been representation—simply being on the faculty,” said Acoff.

Acoff’s moving presentation set the stage for the panel discussion and group conversations that followed. The Voices of TMS panel offered the opportunity for four additional individuals to share their stories and engage in discussion with the audience. Panelists Lawrence Fung, Stanford University; Gabriel Ilevbare, Idaho National Laboratory; Suveen N. Mathaudhu, Colorado School of Mines; and Raul Rebak, GE Global Research, were featured in the panel, moderated by Clarissa Yablinsky, Los Alamos National Laboratory.

### Continuing the Conversations

Resources from DMMM4 sessions can be downloaded from the TMS Diversity, Equity, and Inclusion (DEI) Toolkit, made freely available as part of the TMS DEI website at [www.tms.org/Diversity](http://www.tms.org/Diversity). From this website, you can also view recordings of the DMMM4 Virtual Keynote Series, which the DMMM4 Organizing Committee developed as preparation for the in-person Summit event. You can also learn how to get involved with the TMS DEI Committee, the sponsoring committee of the summit series.

Please also watch the pages of *JOM: The Magazine* and other TMS member communications for updates

on DMMM5. While the pandemic created challenges in the planning and implementation of DMMM4, the response to and impact of the event held on March 2 and 3 of TMS2022 underscored the significance of the summit series to advancing a more inclusive culture within TMS and the profession it serves. As one DMMM4 attendee noted in the post-meeting survey, “I love that TMS supports these summits. None of my other professional societies are doing anything like this. I think it’s very important and it’s reaching a lot of people. Continuing to focus on educating and inspiring, while providing concrete skills and strategies, will ensure our summits continue to have maximum value.”

### Career Development Tools and Strategies



This session focused on sharing actionable tools and strategies for both employers and employees to enhance career development and progression of underrepresented populations. Keynoting the session was Stacie LeSure, Engineers for Equity, with her presentation, "Bruised But Not Broken: Storytelling as a Method to Share the Experiences and Persistence Strategies of African American Women in Engineering Degree Programs."

After a break, the session reconvened for a panel discussion on career development, moderated by Blythe G. Clarke, Sandia National Laboratories. LeSure joined fellow panelists Gabriel Ilevbare, Idaho National Laboratory; J.C. Zhao, University of Maryland; Jim Yurko, Apple; and Amit Misra, University of Michigan, to address audience questions about investing in career development, expanding career horizons, and the advancement of diversity in the STEM fields.

### STEM Outreach Case Studies and Best Practices



This session shared benchmark examples of STEM outreach supporting development of a more diverse STEM pipeline. Formal presentations were paired with a hands-on component where attendees were invited to try out classroom demonstrations such as hardness testing and a materials science superhero exercise, while finding inspiration for activities of their own.

Session highlights included Suveen N. Mathaudhu, Colorado School of Mines, relating his own passion for superheroes and hip hop to STEM concepts in his presentation, "Materials Calisthenics: Harnessing Your Interests to Inspire Diverse Audiences." In "Building Effective STEM Outreach Programs," Jessica A. Krogstad, University of Illinois Urbana-Champaign, explored methods of making outreach efforts more effective using current literature and local case studies. And Rajan Kumar, Stanford University, shared models for designing inclusive undergraduate research experiences in "Designing Inclusive Research Experiences for Undergraduates: A Case Study on the Stanford Materials Science and Engineering REU Program."

### The Invisible Pipeline: Recruitment/Retention of Underrepresented Minorities



Through a case study of the work that Idaho National Laboratory has undertaken to build a more inclusively diverse workforce, an overview of individual and collective actions needed for academic environments to become authentically diverse, and a personal reflection on the positive impact of peer-to-peer mentoring programs, this session explored strategies for removing the barriers that underrepresented minorities (URMs) face in pursuing a materials science and engineering career.

Following the formal presentations was a panel discussion titled, Building the Pipeline—Addressing Diversity Issues in Materials Science and Beyond. Panelists included Ariel D. Murphy-Leonard, The Ohio State University; Ashleigh Wright, University of Illinois Urbana-Champaign; and Michael Rawlings, TMS. In this conversation, panelists and audience members discussed the challenges in recruiting and retaining diverse students and employees as well as implementing recruitment strategies and fostering supportive, inclusive environments.



Before the official start of summit programming, attendees had a chance to reconnect at the DMMM4 Preview and Networking Mixer on Tuesday evening.

### Combating Biases in STEM



This highly engaging session opened with Katie Thomas, Idaho State University, introducing attendees to a strengths-based approach to identifying, investing in, and leveraging the talents of diverse team members. Jonathan D. Madison, National Science Foundation, then led an activity in which participants played Buffalo, a card game by Tiltfactor designed to "subtly challenge your own stereotypes and unconscious bias through play."

The program concluded with small group breakout discussions addressing the question, how does unconscious bias impact your experiences at work? Facilitated by Victoria Miller, University of Florida, these scenario discussions gave attendees a chance to put what they heard and learned during the summit into practice and share personal experiences relevant to the minerals, metals, and materials professions.

## THANK YOU

DMMM4 would not have been possible without the commitment and perseverance of the Organizing Committee

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