

**LA-UR-16-22349**

Approved for public release; distribution is unlimited.

Title: Diversity in the Minerals, Metals, and Materials Professions (DMMM2)

Author(s): Clarke, Amy Jean

Intended for: Web

Issued: 2016-04-07

---

**Disclaimer:**

Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by the Los Alamos National Security, LLC for the National Nuclear Security Administration of the U.S. Department of Energy under contract DE-AC52-06NA25396. By approving this article, the publisher recognizes that the U.S. Government retains nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

# DIVERSITY IN THE MINERALS, METALS, AND MATERIALS PROFESSIONS (DMMM2)



July 25-26, 2016  
Northwestern University, Evanston, IL

**Amy Clarke**

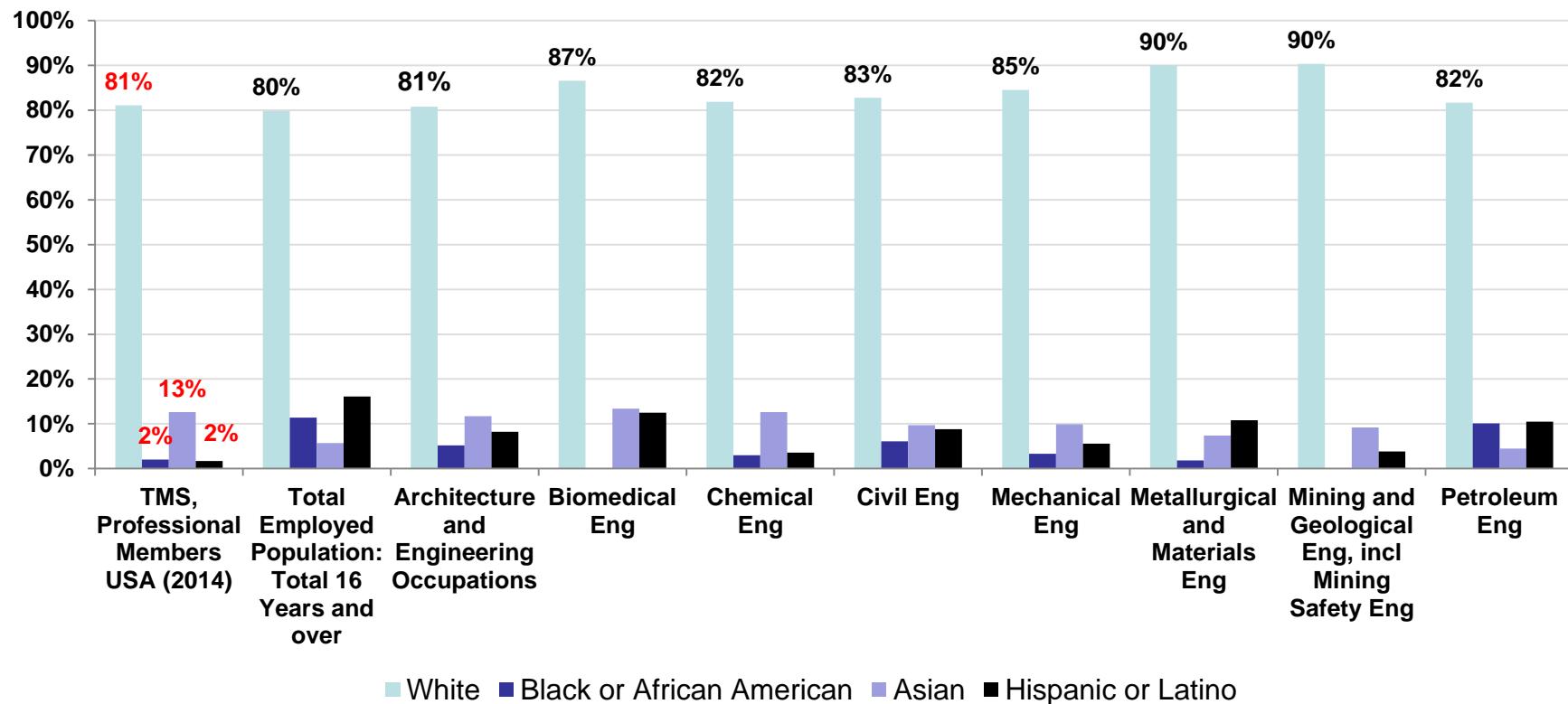
*Summit Organizing Chair  
Scientist, Los Alamos National Laboratory*

**TMS**



# Background Data

## Employed Persons in Metallurgical and Materials and Other Engineering Disciplines by Ethnicity

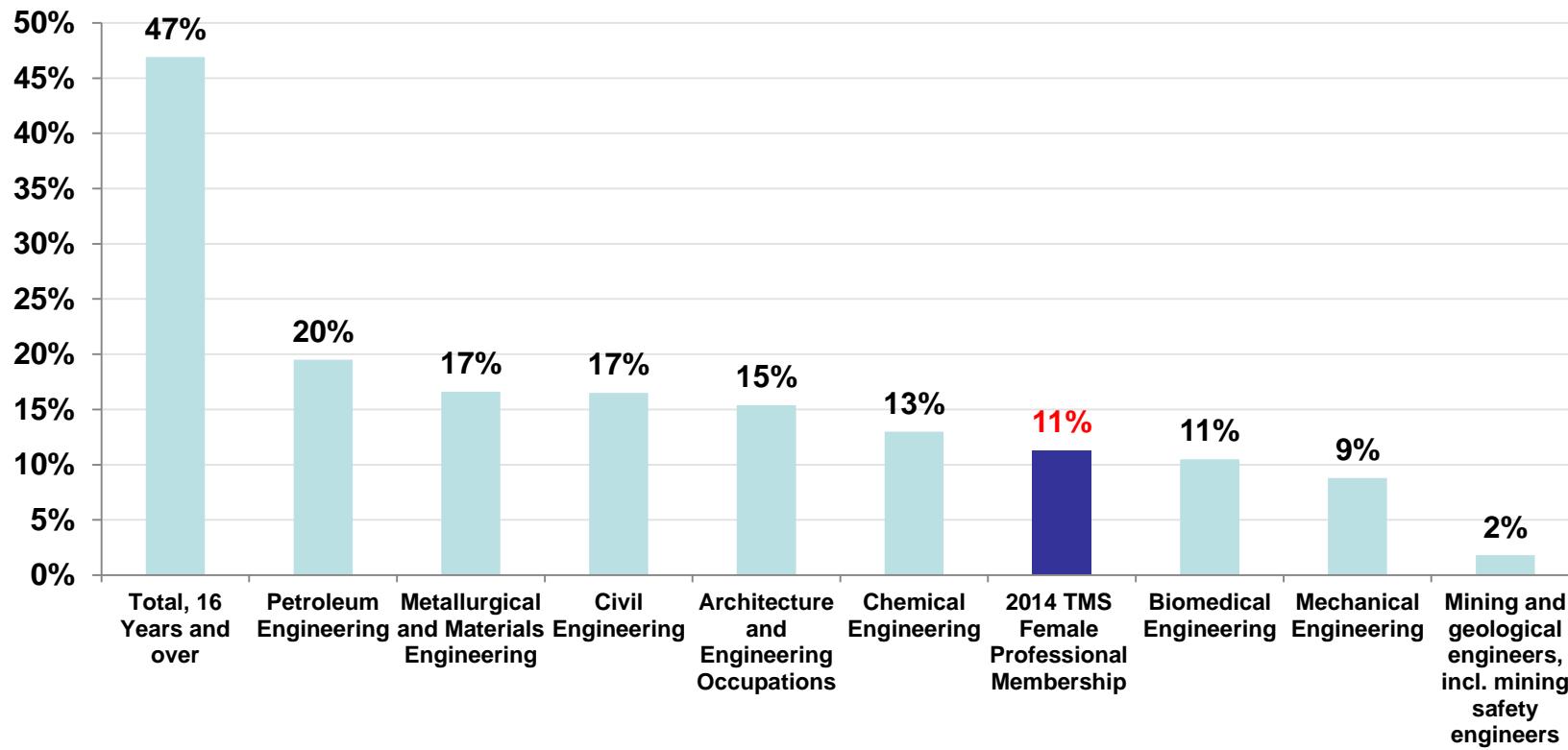


### Sources:

[1] BLS Table 1. Employed and experienced unemployed person by detailed occupation, sex, race, and Hispanic or Latino ethnicity; Annual Average 2014 , 2013, 2012, 2011 (Current Population survey) [2] TMS 2014 Membership Statistics

# Background Data

## Employed Persons in Metallurgical and Materials and Other Engineering Disciplines – Percentage of Women



### Sources:

[1] BLS Table 1. Employed and experienced unemployed person by detailed occupation, sex, race, and Hispanic or Latino ethnicity; Annual Average 2011-2014 (Current Population Survey) [2] TMS 2014 Membership Statistics

# 2018 TMS Strategic Goals



1. Advance **diversity and inclusion** in the minerals, metals, and materials professions
2. Accelerate **industrial engagement** in TMS
3. Globally expand the portfolio of **international activities**
4. Advance materials solutions for **energy and environmental** challenges
5. Be the natural home and advocate for **materials and manufacturing innovation**

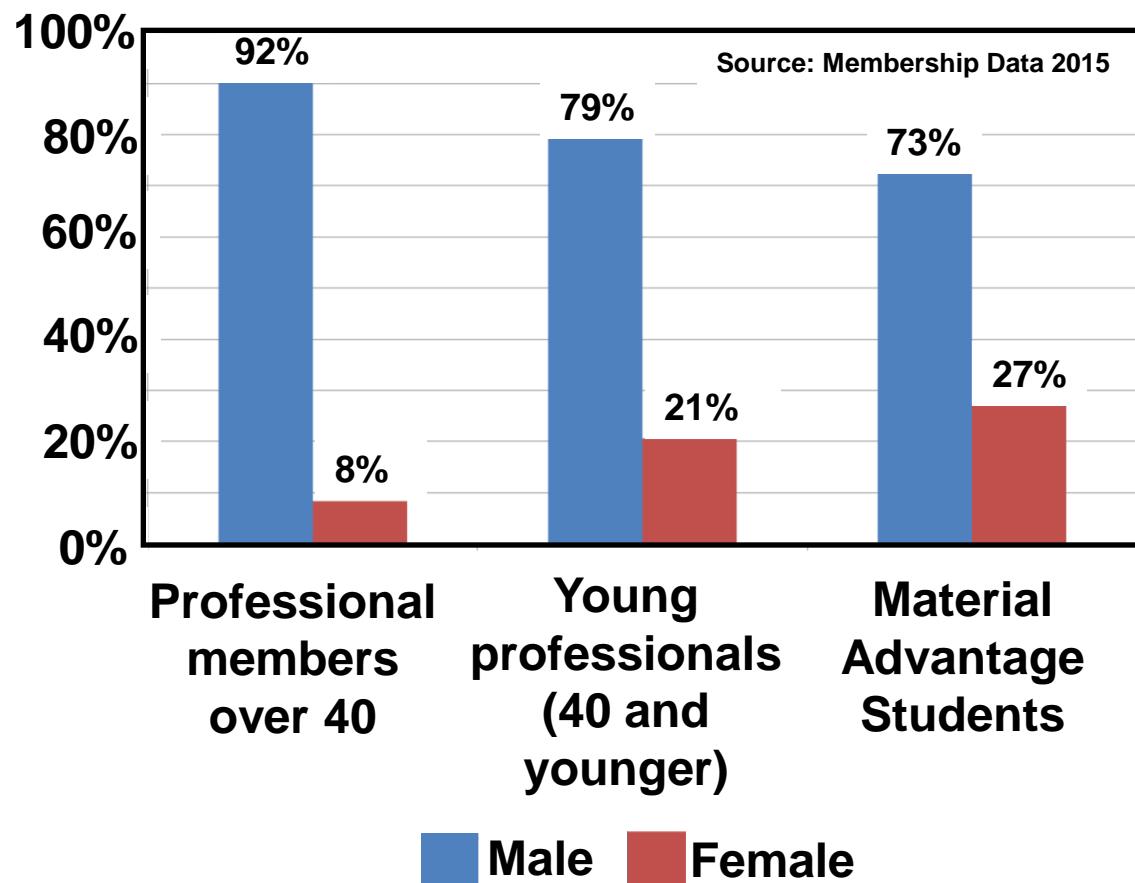


# Diversity and Inclusion Goal

**Advancing a more welcoming and inclusive professional community for all:**

- TMS Summit on Diversity in the Minerals, Metals and Materials Professions (DMMM1, DMMM2)
- Tools, resources, and best practices
- Recognizing pioneers in diversity through two awards programs
- Sharing our progress to encourage engagement

## TMS Membership: Gender and Age

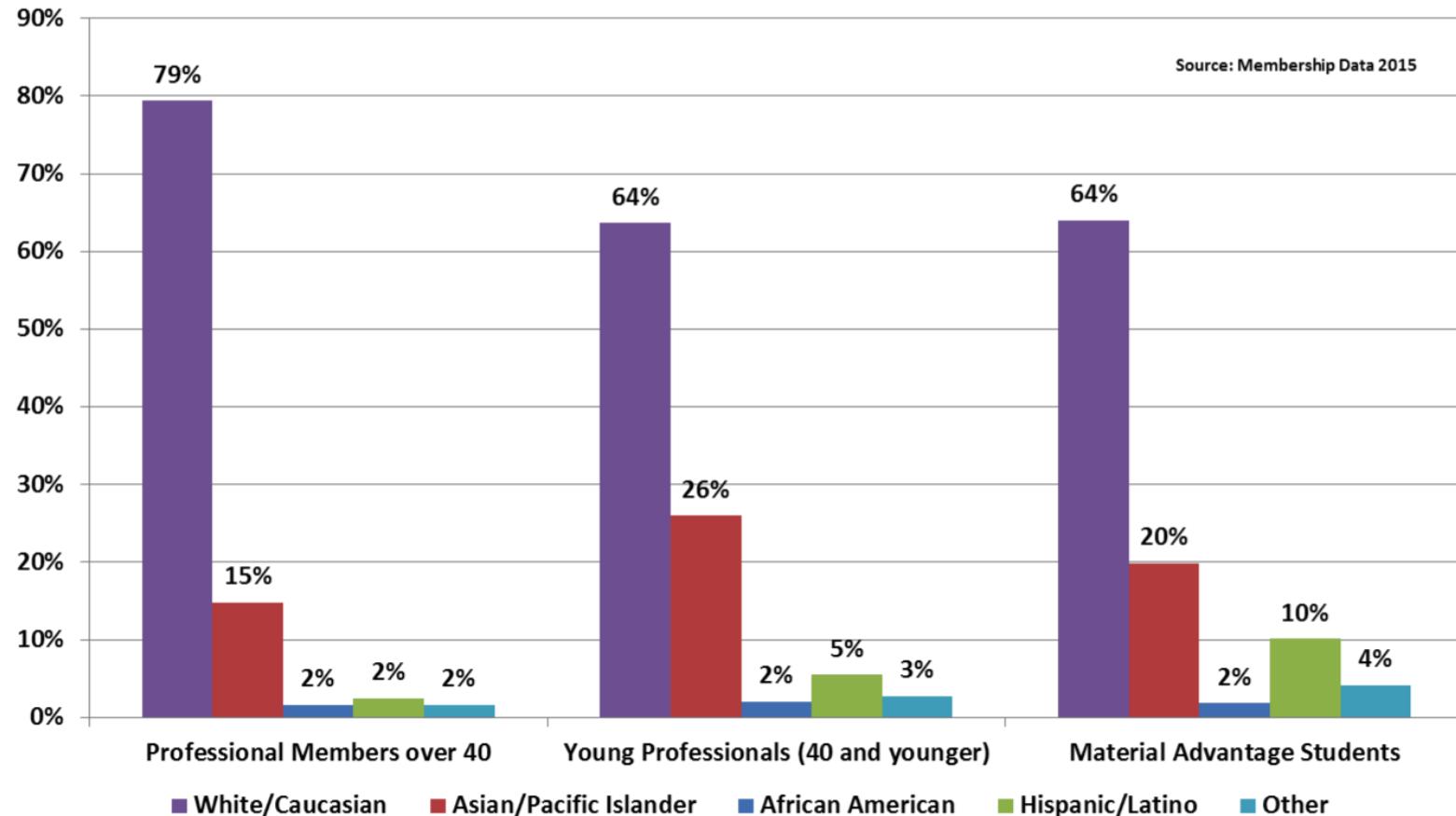




# Diversity and Inclusion Goal

## Ethnicity of U.S.-based TMS Members by Age

2015 TMS Membership Statistics



# DMMM1 Summary

- July 29-31, 2014 at The National Academy of Sciences in Washington, DC
- 115+ Attendees
- ~30 invited speakers
- Keynotes, panel discussions, training modules, and peer-to-peer networking functions
- 92% of surveyed attendees said that they “understand diversity topics better” after attending DMMM1
- 79% said that the experience provided them with “practical skills to support diversity in my workplace.”



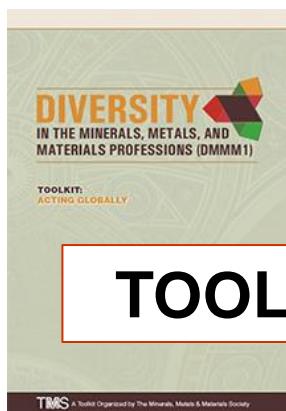


# DMMM1 Outputs



**REPORT:**

- Mentorship
- Work-life Balance
- Community
- Awareness
- Vigilance



**TOOLKIT:**

- TMS Diversity Summit Presentations
- Advancement and Assessment Resources
- Reference Materials
- Skill-Building Resources
- Community Partners and Resources

Access both resources at [www.tms.org/Diversity](http://www.tms.org/Diversity).

## ORGANIZERS

- ***Amy Clarke***, Los Alamos National Laboratory (Chair)
- ***Keith Bowman***, San Francisco State University
- ***Ann Carpenter***, Remote Energy Solutions
- ***Benjamin Cordani***, Caterpillar
- ***Elizabeth Holm***, Carnegie Mellon University
- ***Beth Lewis***, Wyman-Gordon forgings
- ***Jonathan Madison***, Sandia National Laboratories

## KEY THEMES TO BE EXPLORED

- *Improving underrepresented minority (URM) engagement*
- *Creating a welcoming and inclusive workplace culture*
- *Identifying pathways to career fulfillment*

# Why Attend DMMM2?

- **Solutions-Driven Programming:** Not just *why* but *how* to build a more diverse and inclusive professional community
- **Professional Development:** Take home skills and strategies to make a difference in your own workplace and career experience
- **Networking Opportunities:** Expand your network of colleagues who share a commitment to diversity and inclusion

# Programming Details

- **40 Presenters** with unique backgrounds spanning minerals, metals, and materials
- Sessions will cover **Recruitment, Retention, and Pipeline** issues in the MSE fields
- **Government, Academia, and Industry** attendees will share best practices and ideas
- Confirmed Plenary Speakers:
  - **Elizabeth Holm**, Carnegie Mellon University
  - **Susan Kiehl**, Lockheed Martin
  - **Tresa Pollock**, University of California, Santa Barbara
  - Others TBA

# DMMM2 Participants



**Rhonda Olson**  
Diversity Recruitment Manager - North America, Caterpillar Inc.  
*Recruitment II Panelist*  
[View Bio](#)



**Melonie D. Parker**  
VP of Human Resources & Communications, Sandia National Laboratories  
*Recruitment I Panelist*  
[View Bio](#)



**Tresa Pollock**  
Alcoa Professor and Chair, Department of Materials, University of California, Santa Barbara  
*Plenary Speaker*  
[View Bio](#)



**Orlando Rios**  
Research Staff, Materials Science and Technology Division, Oak Ridge National Laboratory  
*Mid-Career Panelist*  
[View Bio](#)



**Jeffrey S. Thompson**  
Dean, College of Science, University of Nevada, Reno  
*Retention II Panelist*  
[View Bio](#)



**Tia Benson Tolle**  
Director, Advanced Materials Product Development, Boeing Commercial Airplanes  
*Executive I Panelist*  
[View Bio](#)



**Shanna Travis**  
Advisor to Deputy Director, Chief Technology Officer, U.S. Department of the Treasury  
*Retention I Panelist*  
[View Bio](#)



**Sossina M. Haile**  
Walter P. Murphy Professor of Materials Science and Engineering, Northwestern University  
*Pipeline II Panelist*  
[View Bio](#)



**Mary Hockaday**  
Associate Director for Experimental Physical Sciences, Los Alamos National Laboratory  
*Executive I Panelist*  
[View Bio](#)



**Theodore Hodapp**  
Director of Education and Diversity, American Physical Society  
*Pipeline I Panelist*  
[View Bio](#)



**Elizabeth Holm**  
Professor of Materials and Engineering, Carnegie Mellon University  
*Opening Plenary Speaker*  
[View Bio](#)



**Susan Kiehl**  
VP of Product Development, Lockheed Martin  
*Plenary Speaker*  
[View Bio](#)



**Debra K. Lasich**  
Associate Vice President for Diversity and Inclusion, Colorado School of Mines  
*Executive II Panelist*  
[View Bio](#)



**DIVERSITY**  
IN THE MINERALS, METALS, AND MATERIALS PROFESSIONS (DMMM2)

July 25-26, 2016 | Northwestern University, Evanston, IL



[About](#) [Programming](#) [Presenters](#) [Registration & Housing/Travel](#) [Honorees](#) [Sponsorship](#)

**Diversity in the Minerals, Metals, and Materials Professions (DMMM2)**

July 25-26, 2016 • Northwestern University • Evanston, Illinois, USA

According to the post-meeting survey, 92% of DMMM1 attendees said they understand diversity topics better after participating in the summit.

## CONFIRMED INVITED PRESENTERS



**Viola Acoff**  
Professor and Associate Dean for Undergraduate Programs, University of Alabama  
*Mid-Career Panelist*  
[View Bio](#)



**Tony Baylis**  
Director, Office of Strategic Diversity and Inclusion Programs, Lawrence Livermore National Laboratory  
*Recruitment II Panelist*  
[View Bio](#)



**David Bahr**  
Head and Professor, Materials Engineering, Purdue University  
*Pipeline II Panelist*  
[View Bio](#)



**Keith Bowman**  
Professor and Dean of the College of Science & Engineering, San Francisco State University  
*Recruitment I Panelist*  
[View Bio](#)



**Kimberly S. Budil**  
VP for Office of the National Laboratories, University of California, Office of the President  
*Retention II Panelist*  
[View Bio](#)



**Ann Carpenter**  
President and CEO, Remote Energy Solutions  
*Pipeline I*  
[View Bio](#)



**Michele Manuel**  
Associate Professor, University of Florida  
*Mid-Career Panelist*  
[View Bio](#)



**Simona Murph**  
Principal Scientist, Savannah River National Laboratory  
*Pipeline II Panelist*  
[View Bio](#)



**Debby Newman**  
Director, Human Resources, Goldcorp  
*Retention II Panelist*  
[View Bio](#)



**Ellen Cerreta**  
Technical Staff Member, Los Alamos National Laboratory  
*Early Career Panelist*  
[View Bio](#)



**Amy Clarke**  
Scientist, Los Alamos National Laboratory  
*Conference Welcome, Opening Reception*  
[View Bio](#)



**Oscar Dubón**  
Professor and Associate Dean for Student Affairs and Equity & Inclusion, University of California, Berkeley  
*Pipeline I Panelist*  
[View Bio](#)



**Lisa Durham**  
Director, Leadership Institute and Principal Environmental Engineer, Argonne National Laboratory  
*Retention I Panelist*  
[View Bio](#)



**Leigh Freeman**  
Principal, Leigh Freeman Consultancy  
*Case Studies*  
[View Bio](#)



**Christine Furstoss**  
Vice President and Technical Director for Manufacturing and Materials Technologies, General Electric  
*Executive II Panelist*  
[View Bio](#)

[www.tms.org/meetings/2016/diversity2016](http://www.tms.org/meetings/2016/diversity2016)

# Who Should Attend?



**“Leaders shouldn’t just preach to the choir, they should be the choir!”**

-Johnnie DeLoach

**Something for Everyone:** DMMM2 will include interactive breakout sessions, panel discussions, case studies and best practices, and networking events suited for attendees from every sector (academia, government, industry) and at any level of their career.

# 2016 Diversity Award Recipients

## Ellen Swallow Richards Diversity Award



**Lynnette Madsen**  
Program Director, National  
Science Foundation

Past Recipients:  
Julia Weertman (2015)  
Viola Acoff (2014)

## Frank Crossley\* Diversity Award



**Carolyn Hansson**  
Professor, University  
of Waterloo

\*Frank Crossley - the first African American to earn a Ph.D. in metallurgy and a long-time TMS member.

# How to be Part of the Solution

- Visit the website to register you and your colleagues:  
[www.tms.org/Diversity2016](http://www.tms.org/Diversity2016)
- Share DMMM2 info with your colleagues
- Visit the toolkit and suggest resources
- Contact me:  
[aclarke@lanl.gov](mailto:aclarke@lanl.gov)





## Other TMS Supporting Initiatives

- **“Transforming the Diversity Landscape” Student-Run Symposium at TMS2016**

- Aim to raise awareness of the current diversity landscape in STEM, and address frequently overlooked implicit biases.
- Concrete takeaways and action plans for attendees to bring back to their communities.
- Afternoon session featured a panel of six past Presidents of TMS, discussing their experiences with Diversity.





# Other TMS Supporting Initiatives

- **TMS Family Care Initiatives**

- Rooms for nursing mothers made available at the Music City Convention Center and Omni Nashville Hotel at TMS2016.
- Added a “Childcare Resources” tab to the TMS2016 website, including links to find local childcare providers.
- A Family Care Support Proposal is in preparation by the TMS Diversity Committee that would provide grants to help offset the expenses of individuals with family care challenges that might experience a hardship traveling to TMS meetings (targeted for 2017).

- **Diversity Myth Busting Quiz**

- Myth-busting quiz available in online format during TMS2016. Enhanced version of paper-format quiz deployed at MS&T15.
- Goal: to raise the level of diversity awareness, spark conversations, and get people involved.
- Quiz was promoted at the TMS Membership Café and by Diversity Committee volunteers throughout the week.

# THANK YOU!