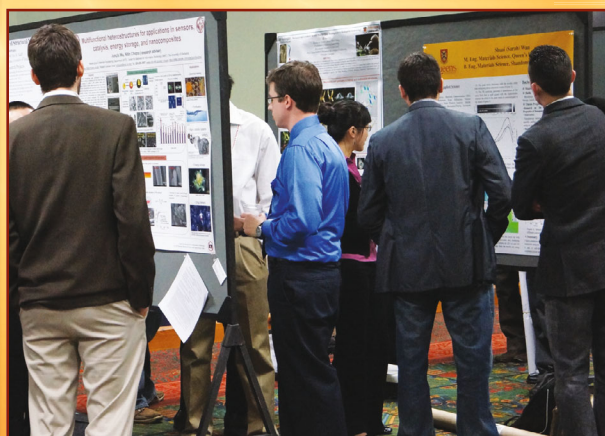


MEET THE 2016 YOUNG LEADERS AWARDEES

Kaitlin McMahon



Receiving a Young Leaders Professional Development Award grants early career TMS members valuable opportunities and insights into growing as a leader within the society and the profession as a whole. The 2016 Young Leaders profiled on the following pages received support from the TMS Foundation to attend the TMS 2016 Annual Meeting & Exhibition (TMS2016), where they accepted their awards during their respective division events. The awardees also attended technical and administrative committee meetings, division council meetings, and

the TMS2016 Board of Directors meeting to gain first-hand experience with a variety of society volunteer and governance activities, as well as to make connections with prominent TMS members.

If you didn't already congratulate the TMS 2016 Young Leaders in person, read on to learn more about these enthusiastic and motivated individuals. Be sure to also add them to your professional network as they continue to flourish as accomplished professionals and contributors to the minerals, metals, and materials community.

Give Back to Your Profession. Give to the TMS Foundation.



When you support the TMS Foundation, you help to sustain important programs for the next generation of scientists and engineers, just like the Young Leaders Professional Development Award recipients featured in this article. Visit the TMS Foundation website at www.TMSFoundation.org to learn more about the programs it supports and to make an online donation. For questions or to make a donation by phone or mail, contact Mary Samsa, TMS Foundation & Public Affairs Manager, at msamsa@tms.org.

2016 Young Leaders Professional Development Award Winners

EXTRACTION & PROCESSING DIVISION (EPD)

Laura Bartlett

Laura Bartlett has served as assistant professor of engineering technology at Texas State University since 2013. She is also currently the Foundry Education Foundation (FEF) Key Professor of Metalcasting Technology as well as director of the Advanced High Strength Materials Laboratory. “As a new professor, I continue to be very thankful to TMS for helping to further my career by allowing me to publish and present my research, as well as serve on the Extraction & Processing Division Council,” said Bartlett. “TMS has been instrumental in the development of my professional career.” Bartlett received both her B.S. and Ph.D. in metallurgical engineering from Missouri University of Science and Technology.

Alexander Senaputra

Alexander Senaputra, an application chemist at Cytec Industries, earned his Ph.D. in applied chemistry from Curtin University in Australia. He also holds a master’s degree in mineral engineering from Murdoch University in Australia, and a bachelor’s degree in metallurgical engineering from Bandung Institute of Technology in Indonesia. “Attending my first TMS annual meeting was made possible by a student travel grant through the TMS Foundation. The work I presented there received the 2014 Light Metals Subject Award – Alumina/Bauxite, which helped me to secure post-graduation

“As a new professor, I continue to be very thankful to TMS for helping to further my career by allowing me to publish and present my research.”

— Laura Bartlett

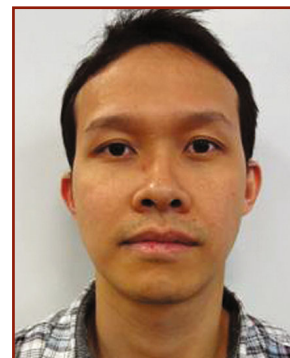
employment,” recalled Senaputra. “I am honored to receive this award, and I also hope it opens the door for opportunities to become more involved in high-level TMS activities and shaping the future of the organization.”

Tao Wang

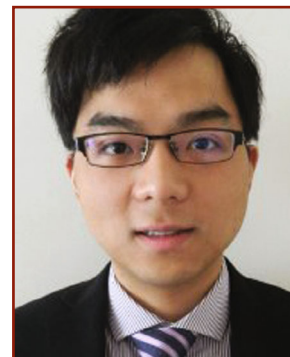
“As the most well-known conference in the world of materials science and engineering, the TMS annual meeting provides a great platform to communicate, update information, and exchange ideas,” said Tao Wang, a castrip metallurgical engineer at Nucor Steel, where he is the lead engineer in process and product research and development areas. “Both the technical information and the conference organization experience have benefitted me significantly in my career. It is my great honor to be selected as the recipient for this award.” Wang obtained his Ph.D. and M.S. from the University of Alabama, and his B.S. from Xi’an Jiao Tong University in China. Wang received the 2013 Light Metals Division Energy Best Paper – Student Award, and in 2015, was selected to attend the Emerging Leaders Alliance.



Laura Bartlett



Alexander Senaputra



Tao Wang

Are You A 2017 Young Leader?

TMS Young Leaders Professional Development Award recipients are dynamic individuals who are looking to become more involved in the minerals, metals, and materials community. They are linked by a common commitment to taking their leadership skills to the next level by being more active as TMS volunteers and helping to advance TMS’s strategic initiatives and impact on the profession.

If you feel that you, or someone you know, fit these criteria, visit the TMS Professional Honors and Awards website at awards.tms.org and select “Young Leader Awards” from the left-hand menu. Applicants must be TMS members who are 40 years old or younger, and must submit a completed application, current resume, and short essay explaining how they will fulfill the criteria for TMS Young Leaders to awards@tms.org. The deadline to submit applications for the 2017 Young Leaders Awards is August 15, 2016.

FUNCTIONAL MATERIALS DIVISION (FMD)



Babak Arfaei

Babak Arfaei

“I have been attending the TMS annual meetings for the last 10 years. Through this period, either as a student, scientist, or instructor, I have always enjoyed the technical sessions as well as the social events,” said Babak Arfaei, research assistant professor, Universal Instruments. “Being part of the TMS community helps me meet with brilliant materials scientists and engineers, learn about new research topics, and exchange fresh ideas with colleagues and friends. I am proud to be involved with TMS and its members.” Arfaei earned both his B.S. and M.S. in materials science and engineering at Tehran University and the Materials & Energy Research Center in Tehran, respectively. He received his Ph.D. in materials engineering at Binghamton University—State University of New York.



Vincenzo Lordi

Vincenzo Lordi

Vincenzo Lordi received his B.S.E. in chemical engineering from Princeton University, with minors in materials science and applied mathematics. He holds an M.S. in electrical engineering and a Ph.D. in materials science from Stanford University, where he was a Hertz Fellow. “TMS membership has benefited my career by providing networking opportunities at the annual meetings and throughout the year,” said Lordi. “I am especially grateful to the TMS Foundation for funding the Young Leaders Professional Development Award, enabling me to increase my involvement with TMS and its various activities.” Lordi previously worked in research and development at KLA-Tencor Corporation, joining Lawrence Livermore National Laboratory (LLNL) in 2006, where he currently works in the Quantum Simulations Group.



Partha Mukherjee

Partha Mukherjee

Partha Mukherjee is currently an assistant professor of mechanical engineering at Texas A&M University (TAMU). He is also a principal investigator for multiple projects on batteries, supported by the National Science Foundation, the U.S. Department of Energy, and NASA. Before

joining TAMU in 2012, he worked with the Department of Energy as a staff scientist at Oak Ridge National Laboratory and as a Director’s Research Fellow at Los Alamos National Laboratory. “TMS provides a unique platform for nurturing young researchers into future leadership roles in a multidisciplinary scientific and technical setting,” Mukherjee noted. “I believe that this opportunity to be part of the TMS Young Leaders program will allow me to contribute to the energy storage and conversion technical area, especially in the broader perspective of mesoscale science in materials and chemistry.” Mukherjee received his Ph.D. in mechanical engineering from the Pennsylvania State University. Prior to his Ph.D. studies, he worked as a consulting engineer for four years at Fluent India Pvt. Ltd.

Tolou Shokuhfar

Tolou Shokuhfar is an associate professor in the University of Illinois at Chicago’s (UIC) Department of Bioengineering and director of UIC’s In-Situ Nanomedicine Laboratory. “As the organizer of the Advanced Materials for Orthopedic and Dental Application symposium and treasurer of the Biomaterials Committee, the support from this award is essential for me. TMS membership will allow me to continue my active participation in technical committees and TMS young professional activities, as well as attend the TMS annual meeting.” In 2014, Shokuhfar received a CAREER Award from the National Science Foundation. She is also a cofounder of the Institute for Biomaterials, Tribocorrosion, and Nanomedicine, a collaborative research initiative between UIC, Michigan Technological University, Rush University Medical Center, and UNESP in Brazil (São Paulo State University).



Tolou Shokuhfar

“TMS provides a unique platform for nurturing young researchers into future leadership roles in a multidisciplinary scientific and technical setting.”

— Partha Mukherjee

Luisa Whittaker-Brooks

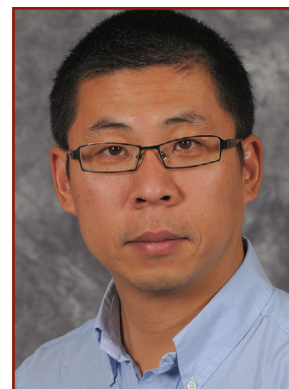
“Being a member of TMS allows me to advocate for advanced solutions for energy and storage challenges. The TMS Foundation provides the necessary tools to encourage professional development across the minerals, metals, and materials professions,” Luisa Whittaker-Brooks said. “This award will enable me to interact with top-notch scientists from both academia and industry to further enhance my knowledge and stimulate collaboration in various areas related to materials synthesis, characterization, and applications.”

Whittaker-Brooks is currently an assistant professor in the Department of Chemistry at the University of Utah. She received her Ph.D. from the University of Buffalo and her B.S. from the University of Panama, both in chemistry.

Yu Zhong

Yu Zhong earned his bachelor’s and master’s degrees from Sichuan University

of Science and Technology in China, and his Ph.D. in materials science and engineering from the Pennsylvania State University. “I have been attending TMS conferences since I was a graduate student in 2004. I look forward to attending every year, meeting with friends, and giving my help to new students and researchers,” said Zhong. After graduation, he joined Saint-Gobain as a senior internal technical consultant, working on the application of fundamental thermodynamics and kinetics in industrial applications. In 2013, he left industry to pursue a career in academia with Florida International University, focusing on integrated experimental and computational approaches to discovery and design of new materials. “Being a member of TMS has given me a lot of opportunities to meet, communicate, and cooperate with excellent researchers worldwide in the materials science and engineering fields,” he said. “It is a great honor to receive this award.”

**Luisa Whittaker-Brooks****Yu Zhong****LIGHT METALS DIVISION (LMD)****Nadia Ahli**

Nadia Ahli currently works as a Lead Engineer—Process Development at Emirates Global Aluminium. Upon receiving the LMD Young Leaders Award, Ahli said, “TMS membership benefits me by organizing events where I can meet clients and suppliers related to the industry; creating an environment where knowledge sharing is effective; attracting professionals worth networking with; exposing me to industry-relevant studies being conducted in academia; and forming a reputable platform to showcase advanced industry related technologies.”

Mehul Bhatia

“As a TMS member, I will be able to join a technical committee, organize a symposium, and serve as a volunteer to embrace and enhance the values of TMS. These opportunities will ultimately enhance my own professional development,” said Mehul A. Bhatia, a postdoctoral researcher at Arizona State University in the School for Engineering of Matter, Transportation & Energy. Bhatia obtained his Ph.D. in mechanical engineering from Arizona State. In 2012, he received the LMD

Magnesium Technology Best Paper Award – Fundamental Research for his work on predicting deformation and failure behavior in magnesium alloys using a multiscale modeling approach.

Jan-Marten Seitz

“TMS offers a unique international network for materials scientists. Especially when working in industry, it is of great importance to stay connected with academic researchers in order to maintain the global view of current research,” said Jan-Marten Seitz, a project manager and R&D specialist at Syntellix AG. “TMS annual meetings create a platform to exchange relevant information with specialists from all over the world. I value my TMS membership as a one-of-a-kind source for regular updates in the field of materials science while also keeping me in touch with the research community.” Seitz has also worked at Leibniz Universität in Germany and Michigan Technological University, focusing on lightweight materials research and biomedical engineering applications. He has developed process chains for resorbable magnesium- and zinc-based implant applications.

**Mehul Bhatia****Jan-Marten Seitz**

MATERIALS PROCESSING & MANUFACTURING DIVISION (MPMD)



Marko Knezevic

Marko Knezevic

Marko Knezevic is a postdoctoral fellow at the University of New Hampshire. He earned his bachelor's and master's degrees in mechanical engineering from the University of Novi Sad in Serbia, and his Ph.D. in materials science and engineering from Drexel University. After graduate school, he joined Scientific Forming Technologies Corporation as a principal research scientist for development of the commercial finite-element software, DEFORM, used for analysis of manufacturing processes. He then moved on to the Materials Science and Technology Division at Los Alamos National Laboratory (LANL) as the Seaborg Institute Postdoctoral Fellow, receiving the Defense Programs Award of Excellence for his research work at LANL. "It is important to be a TMS member for networking, which I think is essential for the professional development," he said.



Samantha Lawrence

Samantha Lawrence

Samantha Lawrence is currently a postdoctoral appointee at Sandia National Laboratories in the Hydrogen & Materials Science Department. She earned her B.S. in metallurgical and materials engineering, with an emphasis in metals processing and corrosion engineering, from Colorado School of Mines. Lawrence was then awarded the U.S. Department of Energy National Nuclear Security Administration Stewardship Science Graduate Fellowship to conduct research in the area of materials behavior in extreme conditions. She obtained her Ph.D. in materials engineering from Purdue University. "Receiving this award will afford me the opportunity to increase my involvement



Soumya Nag

"TMS and the TMS Foundation provide access to a wide array of both career and technical development programs for young researchers, and support students to develop the next generation of scientists and engineers"

— **Samantha Lawrence**

in the society, as well as gain a better understanding of its governance," said Lawrence. "TMS and the TMS Foundation provide access to a wide array of both career and technical development programs for young researchers, and support students to develop the next generation of scientists and engineers. I am excited to be a part of the continued growth and advancement of TMS and the TMS Foundation."

Soumya Nag

"TMS is a great platform for professionals, researchers, and students coming from a variety of scientific and engineering backgrounds. This has definitely helped me to grow professionally, both in terms of developing technical expertise and bolstering networking skills," Soumya Nag, a metallurgist at General Electric, noted. "I feel honored to receive the Young Leaders Professional Development Award and look forward to actively participating in future TMS activities." Nag has more than 10 years of academic and industrial experience in structural materials for aerospace, energy, and biomedical applications. He is actively involved in organizing and chairing sessions in various technical committee meetings and symposia.

Garritt Tucker

"The TMS Foundation and TMS membership have both allowed me to create broad synergistic relationships with colleagues within the materials community," Garritt Tucker said. "Being involved in TMS committees has further enhanced my experience and helped me



Garritt Tucker

"Being involved in TMS committees has further enhanced my experience and helped me to see additional avenues for involvement. Through the TMS Foundation, I hope to pass along these opportunities to others."

— **Garritt Tucker**

to see additional avenues for involvement. Through the TMS Foundation, I hope to pass along these opportunities to others.” Tucker is currently an assistant professor in the Department of Materials Science and Engineering at Drexel University. At Drexel, he leads the Computational Materials Science and Design Research Group. Prior to this appointment, Tucker spent two years as a postdoctoral research appointee in the Computational Materials and Data Science Group at Sandia National Laboratories. He received his undergraduate degrees in math and physics from Westminster College, and his Ph.D. from Georgia Institute of Technology.

Christopher Weinberger

Christopher Weinberger earned his B.S. from California Polytechnic

State University, San Luis Obispo, in mechanical engineering. He then began working at Lockheed Martin Space Systems Company doing finite element analysis in support of materials design. He went on to earn both his M.S. and Ph.D. from Stanford University. “The fact that TMS is a member-driven society gives many younger professionals the opportunity to get involved; this makes TMS more personal and meaningful,” Weinberger reflected. “The TMS annual meetings are of immense professional value because they provide a forum for professionals in our field to interact and present our research. Additionally, they provide the opportunity for young professionals and students to interact with more established professionals and develop a network.”



Christopher Weinberger

“The fact that TMS is a member-driven society gives many younger professionals the opportunity to get involved; this makes TMS more personal and meaningful.”

— Christopher Weinberger

STRUCTURAL MATERIALS DIVISION (SMD)

Lauren Garrison

“The care TMS shows for the next generation of scientists is the main reason I want to become more involved in TMS,” said Lauren Garrison, a Weinberg Fellow in the Fusion Materials and Nuclear Structures Group at Oak Ridge National Laboratory. “When I was a graduate student, I attended a career panel at a TMS annual meeting. I found the panel incredibly useful because it answered so many of my questions. Last year, I was able to start paying the favor back when I was a panelist at the same forum that had been so helpful to me a few years earlier.” Garrison earned her B.S. in the Nuclear, Plasma, and Radiological Engineering Department at the University of Illinois at Urbana-Champaign. She joined TMS as a graduate student in 2010, and completed her

“The care TMS shows for the next generation of scientists is the main reason I want to become more involved in TMS.”

— Lauren Garrison

M.S. and Ph.D. studies at the University of Wisconsin-Madison three years later. Her research interests include plasma-surface interactions for fusion reactors, neutron irradiation effects in materials, brittle matrix composites, and high heat flux materials.

E-Wen Huang

E-Wen Huang, an assistant professor at the National Chiao Tung University in Taiwan, focuses his research on the mechanical behavior of 3D additive manufacturing metals and high entropy alloys. He also chairs the Committee of Industry Application for Radiation Research Center. “TMS is a well-organized professional society, which connects me to a global network. Successful TMS members are my best examples, inspiring me to devote myself to the society,” Huang commented. He completed his undergraduate degree and first master’s degree at Chang Gung University and National Dong Hwa University, respectfully, both in Taiwan. He earned his second master’s degree at Texas A&M University and his Ph.D. at the University of Tennessee.



Lauren Garrison



E-Wen Huang



Eun Soo Park

Eun Soo Park

“I am truly grateful for this recognition, and would like to thank the whole community for helping me get here,” said Eun Soo Park, an associate professor in the Department of Materials Science and Engineering at Seoul National University. “TMS has always been a great meeting place for materials scientists who want to make a long-term valuable impact in the field, and I am proud to be a member. I am looking forward to continuing to contribute to the TMS mission.” After obtaining his Ph.D. in metallurgical engineering from Yonsei University in South Korea, Park worked as a postdoctoral research fellow at Harvard University. He has also been a visiting professor at the National Institute for Materials Science, Tohoku University, the Indian Institute of Technology, Bangalore, the Leibniz Institute for Solid State and Materials Research Dresden, the Max-Planck Institute für Eisenforschung Düsseldorf, and Lawrence Livermore National Laboratory.



Reza Shahbazian-Yassar

Reza Shahbazian-Yassar

Reza Shahbazian-Yassar is an associate professor of mechanical engineering at the University of Illinois at Chicago. Prior to this appointment, he worked at Michigan Technological University and the Center for Advanced Vehicular Systems at Mississippi State University. He earned his Ph.D. at Washington State University in materials science. At TMS, Shahbazian-Yassar has chaired the Advanced Characterization, Testing & Simulation Committee and is a member of the *Metallurgical and Materials Transactions A* editorial board. “TMS has been like a home for me, where I have found a dynamic group of highly intellectual people coming together to build a better life for everyone. TMS has been an open and fair society allowing



Julie Tucker



Natasha Vermaak

“At TMS I have found a professional home and community...I have grown both professionally and personally from the dynamic and forward-thinking initiatives that TMS has offered.”

— **Natasha Vermaak**

for young researchers to engage in the organization of symposiums and to join technical committees,” he said. “Through these activities at TMS, I have been able to obtain national recognition of my research work. I am in debt to this society.”

Julie Tucker

“TMS has always been a part of my scientific career. As a student, I gave my first oral research presentation at a TMS annual meeting,” recalled Julie Tucker, an assistant professor at Oregon State University. “TMS continues to be the place for information exchange, networking, and collaboration in my scientific community. Now that I am a professor, I can share these experiences with my students, the next generation of researchers.” Tucker obtained her B.S. in nuclear energy from the University of Missouri-Rolla, and then her M.S. and Ph.D. from the University of Wisconsin-Madison as a Naval Nuclear Propulsion Fellow. She also worked as a principal scientist at Knolls Atomic Power Laboratory, studying the thermal stability of structural alloys for nuclear power systems.

Natasha Vermaak

“At TMS I have found a professional home and community for my interdisciplinary research,” said Natasha Vermaak, an assistant professor in the Mechanical Engineering and Mechanics Department at Lehigh University. Her research interests include multifunctional architected materials and structures, topology optimization for materials design, modeling thermostructural degradation, and integrated computational materials engineering (ICME). “I am continually inspired by top researchers in our field and am always finding new connections, collaborations, and mentors. I have grown both professionally and personally from the dynamic and forward-thinking initiatives that TMS has offered. I look forward to finding new opportunities to serve and give back to TMS.” Vermaak attended the University of California, Santa Barbara, where she earned her Ph.D. in materials. After graduation, she worked as a postdoctoral scholar at the Institut National Polytechnique in France.

TMS/JIM Young Leaders International Scholar Award

Made possible by the TMS Foundation, this scholar exchange program was established in 2006 between TMS and the Japan Institute of Metals and Materials (JIM) to promote an active member base and strengthen collaboration between the two societies. Awardees from TMS travel to the JIM annual meeting to present a paper and visit nearby universities, labs, or facilities.

"I am very grateful to have been selected as the TMS/JIM Young Leaders International Scholar in 2016," said Saryu Fensin, a postdoctoral researcher at Los Alamos National Laboratory and current

chair of the TMS Young Professional Committee. "Being a TMS member has had a positive impact on my career. It has provided me with opportunities so that I can become a technical leader in my field through organizing symposiums, participating in committees, and networking with people in my field."

Fensin earned her B.A. in chemistry at Mount Holyoke College and her Ph.D. in materials science and engineering at the University of California, Davis. She also received the 2014 Functional Materials Division Young Leaders Professional Development Award.



Saryu Fensin

Early Career Faculty Fellow Award

This award, funded by the TMS Foundation, honors two assistant professors each year for accomplishments that have advanced their academic institution, while also recognizing their potential to broaden the technological profile of TMS. Both award recipients presented a lecture during the Young Professional Tutorial Luncheon at TMS2016 last month.

"For many years, TMS has played a key role in my development, both professionally and personally. The community-minded forums and networks provide great resources for young scientists and engineers to make creative impacts in the world," Elif Ertekin, one of the 2016 Early Career Faculty Fellows, said. "I'm excited about a continued long-lasting relationship with TMS, and I'm looking forward to the opportunity to give back by organizing symposia, participating in committees, and helping to pass along what I've learned to even younger engineers and scientists."

Ertekin is currently an assistant professor in the Department of Mechanical Science and Engineering at the University of Illinois at Urbana-Champaign, and has previously worked at the Berkeley Nanosciences and Nanotechnology Institute and the Massachusetts Institute of Technology. Her work focuses on linking structure at the scale of atoms and electrons to underlying physical phenomena and

mechanisms. She earned her Ph.D. at the University of California, Berkeley in materials science and engineering.

Michael Sangid, the second 2016 Early Career Faculty Fellow, also highlighted the impact that TMS has had on his growth as a professional. "The TMS Foundation has contributed significant time and resources to starting the TMS Young Leaders program, in which I have been fortunate to participate," he said. "This has opened doors to the organizational structure and committees within TMS and has allowed me to be more active within the society. I have the highest respect for the TMS community, as I look forward to attending this conference every year for the world-class research presentations and to meet with friends and colleagues."

Sangid obtained his B.S., M.S., and Ph.D. in mechanical engineering at the University of Illinois at Urbana-Champaign (UIUC). Between his master's and doctoral studies, he spent two years working at Rolls-Royce Corporation. After receiving his Ph.D., Sangid stayed on at UIUC as a postdoctoral associate. In 2012, he joined the School of Aeronautics and Astronautics with a joint appointment in materials engineering at Purdue University. He currently focuses on building computational materials models for failure of structural materials, while also conducting in situ experiments for measuring the spatial strain evolution with respect to a material's microstructure.



Elif Ertekin



Michael Sangid

