

## Speaker Biographies



### **Ayse Asatekin**

*John A. and Dorothy M. Adams Faculty Development Professor  
Assistant Professor, Department of Chemical and Biological  
Engineering, Tufts University*

Ayse Asatekin is currently an assistant professor in the Chemical and Biological Engineering Department at Tufts University. She completed B.S. degrees in Chemical Engineering and Chemistry at the Middle East Technical University (METU) in Ankara, Turkey. She received her Ph.D. in Chemical Engineering from the Program in Polymer Science and Technology at the Massachusetts Institute of Technology (MIT). She completed her post-doctoral studies with

Prof. Karen Gleason, also at MIT. Prior to joining the faculty at Tufts, she worked at Clean Membranes, Inc., a start-up she co-founded to commercialize fouling resistant membranes she developed during her doctoral work. Asatekin's work has been funded by the NSF and the Massachusetts Clean Energy Council, including the NSF CAREER Award. She received the Turkish American Scientists and Scholars Young Scholar Award in 2016. She was also named John A. and Dorothy M. Adams Faculty Development Professor. Her research interests are in developing novel membranes for clean water and energy-efficient separations. She is also interested in multi-functional membranes, controlling surface chemistry for biomedical applications, polymer science, and energy storage.

### **Penny J. Beuning**

*Associate Professor, Department of Chemistry and  
Chemical Biology, Northeastern University*

Penny J. Beuning is an Associate Professor in the Department of Chemistry and Chemical Biology at Northeastern University. Her research on DNA damage tolerance and protein engineering has been recognized with a Cottrell Scholar Award an NSF CAREER Award, an American Cancer Society Research Scholar Award, and the 2015 Chemical Research in Toxicology Young Investigator Award. The integration of teaching and research form the foundation for her educational pursuits. Prof. Beuning has been active in formal efforts to enhance the recruitment and retention of groups traditionally underrepresented in the sciences and she is currently on the board of the Boston chapter of Graduate Women in Science. Prof. Beuning earned a B.A. in Chemistry from Macalester College in St. Paul, MN, and a Ph.D. from the University of Minnesota (2000) in the field of RNA-protein interactions and RNA biochemistry. She completed postdoctoral research focused on protein-protein interactions that regulate cellular responses to DNA damage at the Massachusetts Institute of Technology.





## **Thandi Buthelezi**

*Associate Professor of Chemistry & Chair, Department of Chemistry, Wheaton College*

Thandi Buthelezi is an Associate Professor and Chair of the Department of Chemistry at Wheaton College, Norton, MA. She holds a Ph.D. in Physical Chemistry from the University of Florida and a B.A. in Chemistry from Williams College. Her research interests are in the area of host-guest chemistry and toxic metal ion sensors in aqueous media. She has co-authored over 20 peer-reviewed articles published in several journals including the Journal of Physical Chemistry and Chemical Physics Letters. She has received research funding from the ACS-PRF and the NSF. She served as a reviewer and

panelist for the National Science Foundation. She had also been a member of National Assessment of Educational Progress (NAEP) Science Standing Committee (2008 – 2016). She volunteers as a judge for Massachusetts State Science & Engineering fair.

## **Sarah Delaney**

*Associate Professor of Chemistry, Brown University*

Sarah Delaney received her B.A. in Chemistry from Middlebury College in 1999 and conducted research with Prof. Sunhee Choi on the mechanism of action of cisplatin anti-cancer analogs. She completed her graduate work at the California Institute of Technology in 2004, working in the laboratory of Prof. Jacqueline Barton on the ability of the DNA base stack to serve as a medium for charge transfer reactions. Dr. Delaney was a Damon Runyon postdoctoral fellow in the laboratory of John Essigmann at the Massachusetts Institute of Technology until 2007 where she studied the mutagenicity and toxicity of a variety of oxidized guanine lesions. Dr. Delaney is currently an Associate

Professor in the Department of Chemistry at Brown University. Research in her laboratory is focused on establishing a chemically logical roadmap to understand how DNA damage relates to genetic change and human disease. In addition to researching the biochemistry of DNA damage she has an interest in cooking and how chemistry influences food. She teaches Organic Chemistry, Chemical Biology, and a broad interest course titled Kitchen Chemistry. She has been awarded an Outstanding New Environmental Scientist (ONES) Award from NIH/NIEHS and the Philip J. Bray Award for Excellence in Teaching in the Physical Sciences from Brown University.



## **Swathi Kiran**

*Professor, Director, PhD program,  
Director, Aphasia Research Laboratory,  
Research Director, Aphasia Resource Center, Boston University*



Swathi Kiran began her studies at All India Institute of Speech & Hearing where she received a bachelor's degree in Speech Pathology and Audiology. She then went on to continue her studies at Northwestern University, where she remained through her masters and doctorate programs studying Speech Language Pathology. Following her graduation, she participated in two clinical fellow programs, the first at Advanced Therapy and Rehabilitation, Bloomington, IL, and the second at Healthsouth Rehabilitation Hospital, Austin. She held teaching positions in the Department of Communication Sciences and Disorders at University of Texas at Austin. From there, she joined Boston University as an Associate Professor in the Department of Speech, Language, and Hearing Sciences in 2009, as well as the Research Director of the Aphasia Resource Center. She continues to head up research at the ARC, as well as being a Professor in the Department of Speech, Language, and Hearing Sciences. Professor Kiran also participates with various panel and boards on both the national and international scale.

## **Michelle Kovarik**

*Assistant Professor of Chemistry, Trinity College*

Michelle Kovarik grew up in northern Kentucky and obtained her B.S. in chemistry from Saint Louis University in 2004. She went on to graduate work on the design, operation, and application of nanofluidic devices at Indiana University. In 2010, she began an NIH-funded IRACDA postdoctoral position, where she worked on single-cell enzyme assays and taught at North Carolina A&T State University. Since July 2013, she has been an assistant professor of chemistry at Trinity College, a primarily undergraduate liberal arts college in Hartford, CT. At Trinity, she teaches 2-3 undergraduate courses per semester

fellow programs, the first at Advanced Therapy and Rehabilitation, and maintains an active, NSF-funded undergraduate research program on microfluidic and molecular tools for enzyme assays.



## **Jaclyn “Jackie” Matthes**

*Assistant Professor of Biological Sciences,  
Wellesley College*

Jaclyn Hatala Matthes is an Assistant Professor of Biological Sciences at Wellesley College whose research and teaching focus on the interaction between ecosystems and climate change. She received her Ph.D. from the University California, Berkeley in Environmental Science, Policy, and Management in 2013. She then was a postdoctoral researcher at Boston University in the department of Earth & Environment. Prior to joining the faculty at Wellesley, she was an Assistant Professor at Dartmouth College for two years in the department of Geography and advisory faculty in the Ecology, Evolution, Ecosystems, and Society Ph.D. program.



## **Carla Mattos**

*Professor of Chemistry and Chemical Biology,  
Northeastern University*

Professor Mattos received her Ph.D. in Chemistry from the Massachusetts Institute of Technology. Her areas of expertise include chemical biology, biochemistry of signaling proteins, structural biology. Her research interests include GTPases of the ras family; protein interactions; protein X-ray crystallography; solvent mapping of protein surfaces; structure based ligand discovery.





## **Marilyn Minus**

*Associate Professor of Mechanical and Industrial Engineering,  
Northeastern University*

Dr. Marilyn Minus is currently an Associate Professor in the Department of Mechanical and Industrial Engineering at Northeastern University. She is also the director of the Macromolecular Innovation in Nano-materials Utilizing Systems Laboratory otherwise known as the MINUS-lab. She received her BS and PhD from the Georgia Institute of Technology in the area of Polymer, Textile, and Fiber Engineering. Dr. Minus' research is focused on addressing sustainability issues with the goal of producing

energy efficient lightweight materials and understanding natural hierarchical systems in order to design and fabricate structural materials. These materials are based on bio-polymer and high-polymer nanocomposites. The fundamental aim for Dr. Minus' research is to understand phenomena associated with polymer/nano-filler structural development in the composites during processing procedures. This research work expands the scientific and technological base for understanding the manipulation of nano-scale matter during composite fabrication as it pertains to building mechanically superior materials. Both the technical and educational research work in the MINUS lab has been supported by ~\$9M in funding to date from agencies including NSF, AFOSR, ARO, and DARPA. Professor Minus has published more than 30 scientific publications and presented over 25 conference papers in the area of polymer-based nano-composites and is also the recipient of the NSF CAREER award.

## **Mindy Levine**

*Associate Professor of Chemistry, University of Rhode Island*

Mindy Levine is an Associate Professor at the University of Rhode Island (URI), where she runs a research group focused on the use of supramolecular organic chemistry for a variety of high-impact detection applications. Prior to her appointment at URI, Mindy was an NIH-funded postdoctoral fellow in the laboratory of Timothy Swager at MIT. She received her undergraduate and graduate degrees from Columbia University, where she conducted research with Ronald Breslow studying the origin of homochirality. Mindy has published more than 30 papers in her independent career and has received close to \$2 million in external research support. In her spare time, Mindy enjoys spending time with her three children, competing in triathlons, and conducting formal and informal science outreach.





## **Carolyn Ruppel**

*Research Geophysicist & Visiting Professor, USGS Woods Hole Coastal and Marine Science Center and MIT*

Carolyn Ruppel is a marine geophysicist who obtained her BS, MS, and PhD degrees at the Massachusetts Institute of Technology (MIT) between 1982 and 1992. After a stint as a Postdoctoral Scholar at Woods Hole Oceanographic Institution, she spent 1994 to 2006 as a geophysics professor at Georgia Tech, where she developed courses in earth and ocean science, hydrology, environmental field methods, and numerical modeling. From 2003-2006, she was also a program manager reviewing and funding research at the National Science Foundation, Division of Ocean Sciences. She moved to a senior position in the US Geological Survey in Woods Hole in 2006 and is now

Project Chief of the USGS Gas Hydrates Project. Recently, she has led numerous oceanographic expeditions in the Arctic Ocean and on the US Atlantic margin. Ruppel serves on the US Arctic Icebreaking Coordinating Committee and the Advisory Board for the University of Tromsø Centre of Excellence (Centre for Arctic Gas Hydrate, Environment and Climate—CAGE) and has been a member of DOE's Federal Advisory Committee for the Methane Hydrates R&D Program, among numerous other committees. She also served as Distinguished Lecturer for the Ocean Drilling Program, has testified to several National Research Council panels, founded the Gordon Research Conference in gas hydrates, and is a Fellow of the Geological Society of America. She is author or coauthor of more than 70 peer-reviewed articles and book chapters and has done substantial outreach, including videostreaming of remotely-operated vehicle seafloor imagery to the Internet to engage the public in real-time discovery-based science. She splits her time between the USGS Woods Hole Coastal and Marine Science Center and MIT, where she holds a visiting appointment.

## **Yadilette Rivera-Colón**

*Assistant Professor of Biology, Undergraduate Science Program Research Coordinator, Bay Path University*

Yadilette Rivera-Colón, PhD, is an Assistant Professor of Biology and Undergraduate Science Program Coordinator at Bay Path University. She teaches Applied DNA Biology for the Applied Laboratory Science & Operations graduate program. She earned her doctorate in Molecular and Cellular Biology in 2013 from University of Massachusetts, Amherst, where she researched structural and biochemical properties of human lysosomal enzymes. Upon completion of her doctorate, she became an IRACDA Post-doctoral fellow at the PENN-Professional Opportunities for Research and Teaching, in the laboratory of Ronen Marmorstein, Ph.D at University of Pennsylvania, where she focused on biochemical studies of protein acetyltransferases. As a researcher, Dr. Rivera-Colón has presented various projects and she also collaborated with undergraduate students on published articles. In addition, she has won many honors and awards, including best posters and fellowship grants. Most importantly, her career has been shaped by her passion for education. She strongly believes in teaching the importance of the scientific basis within the context of everyday problems, and taking into consideration both its historical importance and future application.





## **Jennifer L. Ross**

*Associate Professor of Physics,  
Massachusetts Center for Autonomous Materials*

Ross is the director of the new Massachusetts Center for Autonomous Materials (MassCAM) and an award-winning biophysicist studying the organization of the microtubule cytoskeleton and microtubule-based enzymes using high-resolution single molecule imaging techniques. She has a degree in Physics, and has studied the microtubule cytoskeleton for over a decade. As a Cottrell Scholar, Ross has pioneered innovative teaching techniques that are being adopted around the world. She is also an advocate for women and under-represented groups and has a blog to help others make it in academics.

## **Hadley D. Sikes**

*Associate Professor, Department of Chemical Engineering,  
Massachusetts Institute of Technology*

Hadley D. Sikes is the Esther and Harold E. Edgerton associate professor of chemical engineering at the Massachusetts Institute of Technology. She leads a team of researchers in the application of physical principles to design, synthesize, characterize and test molecules for utility in detecting and understanding disease. Hadley earned a BS at Tulane University, a PhD at Stanford University, and was a postdoctoral scholar at the University of Colorado, Boulder, and the California Institute of Technology prior to joining the faculty at MIT.

