

New England Future Faculty Workshop (FFW)

2018 Speakers

Javier Apfeld

Assistant Professor, Department of Biology, Northeastern University

Javier Apfeld is an Assistant Professor in the Biology Department at Northeastern University. He is interested in elucidating how the brain regulates changes in cellular, tissue, and organismic function with aging, as well as educating students and the public on the science of aging. He grew up in Buenos Aires, Argentina, and then received a B.Sc. in Biology from MIT. As a graduate student, Prof. Apfeld pioneered using genetics to study aging in Prof. Cynthia Kenyon's lab at UCSF, and discovered that the brain regulates lifespan in the nematode *C. elegans*. He then translated this new science of aging in biotech, seeking to develop therapies for age-related diseases. Returning to academia, He built enabling technologies for studying *C. elegans* aging in collaboration with Prof. Walter Fontana, a theorist and computational scientist at Harvard Medical School. Prof. Apfeld came to Northeastern University almost three years ago and was recently awarded an NSF CAREER award to fund his lab's research on how cellular communication influences the oxidation of proteins with aging.



Penny J. Beuning

Professor, Department of Chemistry and Chemical Biology, Northeastern University

Penny J. Beuning is a 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 & 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*. Prof. Buthelezi 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.



Carlos Hidrovo

*Assistant Professor, Department of Mechanical and Industrial Engineering,
Northeastern University*

Dr. Carlos Hidrovo is an assistant professor in the Mechanical and Industrial Engineering Department at Northeastern University. He earned his Ph.D. in Mechanical Engineering from the Massachusetts Institute of Technology. Prior to joining Northeastern, Dr. Hidrovo held professional appointments at MIT, Stanford University, and The University of Texas at Austin. He is the recipient of an NSF CAREER Award from the Fluid Dynamics program, a DARPA Young Faculty Award from the Microsystems Technology Office (MTO), and an ASME Robert T. Knapp Award. Dr. Hidrovo's research interests lie at the intersection of multiscale and multiphase flow and transport phenomena, surface tension interactions in micro/nanoengineered structures, and electrokinetic ion transport in porous media for applications in energy storage, portable biochemical diagnostics, thermal management, and water treatment systems. He is also actively involved in developing novel imaging and diagnostic tools in these areas.

Francisco Hung

Associate Professor, Department of Chemical Engineering, Northeastern University

Francisco R. Hung is an Associate Professor in the Department of Chemical Engineering at Northeastern University. Prior to his current appointment, he was the Paul M. Horton Associate Professor and Director of Graduate Studies in the Cain Department of Chemical Engineering at Louisiana State University, and an Adjunct in the Center for Computation and Technology also at LSU. He holds an undergraduate degree in Chemical Engineering from Universidad Simón Bolívar in Caracas, Venezuela (1996), and a PhD in Chemical Engineering from North Carolina State University (2005). He then worked as a postdoctoral researcher in the Department of Chemical and Biological Engineering at the University of Wisconsin-Madison, and joined the faculty at LSU in Fall 2007. Honors include a CAREER Award from the National Science Foundation (2013), the LSU Rainmaker Emerging Scholar in STEM Award (2014), a Ralph E. Powe Junior Faculty Enhancement Award from Oak Ridge Associated Universities (2008), and the Richard H. Sioui Award for Excellence in Teaching in Chemical Engineering at Northeastern University (2018). His research program is focused on investigating different systems involving mixtures and interfaces using molecular simulation. Current research interests in his group include ionic liquids and deep eutectic solvents, nanoporous materials, organics in environmental interfaces, crystal nucleation, biomaterials and drug delivery. His research is relevant to applications in advanced manufacturing, nano/bio-materials, drug delivery, separations, energy storage and environmental chemistry.



Swathi Kiran

Professor, Department of Speech, Language, and Hearing Sciences; Associate Dean for Research, College of Health and Rehabilitation Sciences, 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, TX. 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.

Melissa Kibbe

Assistant Professor, Department of Psychological and Brain Sciences, Boston University

Melissa M. Kibbe is Assistant Professor of Psychological & Brain Sciences at Boston University. She received her BS in Psychology from the University of Massachusetts at Boston, and her PhD in Psychology with a certificate in Cognitive Science from Rutgers University. She went on to do postdoctoral research in the Department of Psychological & Brain Sciences at Johns Hopkins University before coming to BU in 2014. Prof. Kibbe currently directs the Developing Minds Lab at Boston University, where she and her research team study early cognition and cognitive development in infants, children, and adults.



Lee Makowski

Professor and Chair, Department of Bioengineering, Northeastern University

Lee Makowski received his B.S. at Brown University in Physics, and Masters and Ph.D. at Massachusetts Institute of Technology in Electrical Engineering. After doing postdoctoral research at Brandeis University in Structural Biology, he joined faculty of the College of Physician and Surgeons at Columbia University in the Biochemistry Department. He moved to Boston University as Professor of Physics and later accepted a position as Director of the Institute of Molecular Biophysics at Florida State University. In 1998 he joined the National Science Foundation where he was a Program Director first in the Biology Directorate and then in the Division of Materials Science. From 2000 until 2010 he was at Argonne National Laboratory, first as Biosciences Division Director and then as Senior Scientist. He moved to Northeastern in the fall of 2010. He is an author of over 100 scientific research papers and numerous review articles on innovative analyses of biophysical data with focus on x-ray and neutron scattering and x-ray imaging.



Marilyn Minus

*Associate Professor, Department 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 40 scientific publications and presented over 30 conference papers in the area of polymer-based nano-composites and is also the recipient of the NSF CAREER award. She is currently a member of American Chemical Society (ACS), Materials Research Society (MRS), and Society for the Advancement of Material and Process Engineering (SAMPE), and the Society of Plastics Engineers (SPE).



Saritha Nellutla

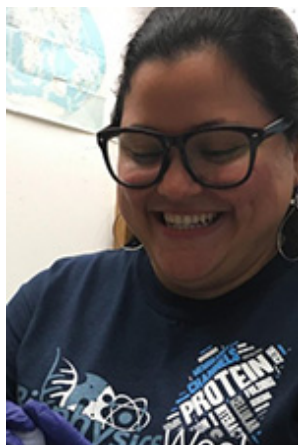
Assistant Professor, Department of Chemical Sciences, Bridgewater State University

After receiving a Ph.D. in physical chemistry from the Florida State University in Tallahassee, FL, Dr. Nellutla joined National High Magnetic Field Laboratory as a postdoctoral assistant and instrument manager. Following her time in Florida, she joined Dr. Smirnov's research group at the North Carolina State University before joining the faculty of Bridgewater State University in 2014. Dr. Nellutla's research interests include the synthesis and experimental/theoretical characterization of transitional magnetic metal ion clusters and nanomagnetic materials, as well as designing novel pedagogical methods to increase engagement of undergraduate students in physical chemistry courses.

Toyoko Orimoto

Assistant Professor, Department of Physics, Northeastern University

Toyoko Orimoto is an assistant professor of physics at Northeastern University. As an experimental particle physicist, Prof. Orimoto explores the high energy frontier to study the smallest constituents of nature. Her work currently focuses on studies of the recently discovered Higgs boson using the CMS Detector at the Large Hadron Collider, located at the CERN laboratory in Geneva, Switzerland. Prof. Orimoto has received a Department of Energy Early Career Award for her work. Prior to her appointment at Northeastern, she was a CERN fellow (2009-2012) and the Robert A. Millikan postdoctoral fellow in experimental physics at Caltech (2006-2009). She received her PhD in experimental particle physics from the University of California, Berkeley (2006).



Yadilette Rivera-Colón

Assistant Professor, Science Department, 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.

Carolyn Ruppel

Research Geophysicist & Visiting Professor

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 (tenured in 2000) at Georgia Tech, where she developed a wide range of courses and mentored many undergraduate research projects. From 2003-2006, she was also a program manager managing 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, an international leader in studying natural gas hydrate systems for energy and climate implications. Since 2010, Ruppel has led numerous oceanographic expeditions in the Arctic Ocean and on the US Atlantic margin. She serves on the US Arctic Icebreaking Coordinating Committee and the Advisory Board for the University of Tromsø Centre of Excellence and has been a member the U.S. Department of Energy's Federal Advisory Committee for the Methane Hydrates R&D Program, editorial boards, and numerous national/international committees in marine science. 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/coauthor of more than 70 peer-reviewed articles and has done substantial outreach to the public and mentorship to younger scientists. Ruppel lives outside Boston with her husband (a MIT engineering professor) and her (nerdy) teenaged daughter. She splits her time between the USGS in Woods Hole and MIT, where she holds a visiting appointment.

