

# ORNL/Georgia Tech Joint Workshop in Neutron Science and Scattering

January 27, 2016

## Georgia Institute of Technology Presenters' Biographies



**M.G. Finn**, [mgfinn@gatech.edu](mailto:mgfinn@gatech.edu)

Dr. M.G. Finn is Chair of the School of Chemistry and Biochemistry at Georgia Tech, and Director of the Center for Pediatric Nanomedicine. Finn studied chemistry at Caltech and earned his Ph.D. at MIT. Following a postdoctoral fellowship at Stanford, he served on the faculties of the University of Virginia and The Scripps Research Institute, moving to Georgia Tech in 2013. Finn's current interests include the use of virus particles as molecular and catalytic building blocks for biomedical science and functional materials development. He is Editor-in-Chief of the journal ACS Combinatorial Science.



**Martha Grover**, [martha.grover@chbe.gatech.edu](mailto:martha.grover@chbe.gatech.edu)

Dr. Grover is an associate professor of Chemical & Biomolecular Engineering at Georgia Tech. Her research activities in process systems engineering focus on understanding macromolecular organization and the emergence of biological function. The Grover group is dedicated to the development of tractable and practical approaches for the engineering of macroscale behavior via explicit consideration of molecular and atomic scale interactions. They focus on applications involving the kinetics of self-assembly, specifically those in which methods from non-equilibrium statistical mechanics do not provide closed form solutions. General approaches employed include stochastic modeling, model reduction, machine learning, experimental design, robust parameter design, and estimation.



**Asegun Henry**, [asegun.henry@me.gatech.edu](mailto:asegun.henry@me.gatech.edu)

Dr. Asegun Henry is an Assistant Professor in the George W. Woodruff School of Mechanical Engineering at Georgia Tech. He received his Ph.D. from MIT in 2009 under the supervision of Professor Gang Chen. He also holds a B.S. in mechanical engineering from Florida A & M University and an M.S. in mechanical engineering from MIT. Dr. Henry's primary research background is in heat transfer, with a specific emphasis on understanding energy transport storage and conversion at the atomic level. Prior to joining Georgia Tech, Asegun also worked as a postdoc in the materials theory group at Oak Ridge National Laboratory (ORNL) developing an approach to predict the thermal conductivity of materials fully from first principles, and as a postdoc in the materials science department at Northwestern University, where he studied the thermodynamic properties of reactive oxides for use in high temperature solar thermochemical reactors. After Northwestern, Asegun worked as a fellow in the advanced research projects agency – energy (ARPA-E), where he focused on identifying new program areas, such as higher efficiency, lower cost solar and thermal energy conversion and storage. [www.ase.gatech.edu](http://www.ase.gatech.edu)



**Josh Kacher**, [josh.kacher@mse.gatech.edu](mailto:josh.kacher@mse.gatech.edu)

Dr. Kacher is an assistant professor of Materials Science and Engineering at Georgia Institute of Technology. His primary research interests are in understanding the mechanical behavior of materials in extreme environments using in situ electron microscopy techniques. His research group is interested in understanding the mechanical behavior of materials in extreme environments. This includes understanding how environmental factors such as irradiation or liquid metal embrittlement affect the mechanical properties and failure modes of materials. He received his PhD from the University of Illinois working with Ian Robertson and completed a post doc at Berkeley working with Andrew Minor.

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**Raquel Lieberman**, [raquel.lieberman@chemistry.gatech.edu](mailto:raquel.lieberman@chemistry.gatech.edu)

Dr. Raquel Lieberman is an Associate Professor in the School of Chemistry & Biochemistry at Georgia Institute of Technology. Dr. Lieberman joined the faculty in January 2008 after conducting postdoctoral work with Greg Petsko at Brandeis and earning her PhD with Amy Rosenzweig at Northwestern. Her research group focuses on protein structure and function, particularly misfolding as well as hydrolysis that occurs within or near the lipid membrane, using structural, biophysical, and biochemical approaches.



**Mark Losego**, [losego@gatech.edu](mailto:losego@gatech.edu)

Dr. Losego is an Assistant Professor of Materials Science and Engineering at Georgia Tech. His research group explores materials systems that interface organic and inorganic constituents for a wide range of applications including solar fuels, capacitive energy storage, waste heat recovery, and technical textiles. Combining expertise in vacuum processing equipment design, construction, and operation (e.g., ALD, MLD, PVD, etc.) with chemical solution synthesis methods, the Losego group seeks to obtain precise control over interfacial structure to elucidate the origin of fundamental transport properties of relevance to organic-inorganic hybrid device performance.



**Matthew McDowell**, [mattmcdowell@gatech.edu](mailto:mattmcdowell@gatech.edu)

Dr. Matthew McDowell joined Georgia Tech in the fall of 2015 as an assistant professor with a joint appointment in the George W. Woodruff School of Mechanical Engineering and the School of Materials Science and Engineering. He received his Ph.D. in 2013 from the Department of Materials Science and Engineering at Stanford University and subsequently was a postdoc at Caltech. His research group's work encompasses both the fundamental investigation of materials transformations in electrochemical systems, as well as the development of improved energy systems through materials and device engineering.



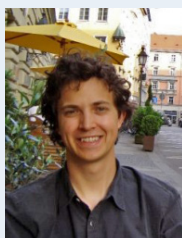
**Martin Mourigal**, [mourigal@gatech.edu](mailto:mourigal@gatech.edu)

Dr. Mourigal joined Georgia Tech in 2015 as an assistant professor in the School of Physics. Prior to joining Georgia Tech, he completed a three-year postdoctoral research fellowship at the Institute for Quantum Matter at Johns Hopkins University in Baltimore, Maryland. He earned his PhD in experimental physics jointly from the Institut Laue-Langevin in Grenoble, France and École Polytechnique Fédérale de Lausanne in Lausanne, Switzerland. His research interests combine materials characterization, neutron scattering, data analysis and theory to explore novel magnetic and electronic states of quantum matter.



**Joseph Sadighi**, [joseph.sadighi@chemistry.gatech.edu](mailto:joseph.sadighi@chemistry.gatech.edu)

Dr. Sadighi is currently an Associate Professor in the School of Chemistry and Biochemistry at Georgia Tech. He studied chemistry at Williams College, earned his Ph.D. from MIT, and held a postdoctoral position at Caltech before beginning his independent career. Research in the Sadighi group focuses on the development of low-coordinate complexes of late transition metals, particularly the group 11 metals, featuring unusual metal-metal and metal-element bonding. These bonding motifs are sought to enable difficult bond-forming and bond-breaking processes, and thus lead to new catalytic small molecule transformations.



**Simon Sponberg**, [simon.sponberg@physics.gatech.edu](mailto:simon.sponberg@physics.gatech.edu)

Simon Sponberg is an assistant professor of physics and applied physiology at Georgia Tech. He earned his Ph.D. from UC, Berkeley and did his postdoctoral work at the University of Washington. Simon is a Hertz fellow and was awarded the young investigator award from the International Society of Neuroethology and a NSF biological informatics fellowship. His research is at the interface of physics and physiology, using a dynamic systems and neuromechanics approach to understand biological locomotion, motor control, and the multiscale physics of muscle.