



## Post-doctoral Research Associate

*Illinois Materials Research Center  
University of Illinois at Urbana-Champaign*

The Illinois Materials Research Center at the University of Illinois at Urbana-Champaign is seeking a highly motivated post-doctoral research associate (PDRA) to lead experimental efforts on time- and frequency-resolved studies of magnetization dynamics driven by ultrafast optical pulses and ultrafast currents of heat, charge, and spin.

The work will be performed in the interdisciplinary research group “Metallic Antiferromagnets and their eXcitations” (MAX), which is supported by the US National Science Foundation and is a collaboration between University of Illinois faculty in Physics (Lorenz, Mason), Materials Science and Engineering (Hoffmann, Cahill, Shoemaker, Schleife) and Electrical and Computer Engineering (Gilbert). The scientific goals of MAX are to discover new metallic antiferromagnetic materials and explore by theory, computation, and experiment the interactions between light, heat, charge, and spin in this class of materials. A 9-target sputter deposition system and a wavelength tunable pump-probe system have been constructed to support the experimental work of the PDRA and other junior researchers in MAX. Furthermore, variable temperature microwave measurements and a spatially resolved Brillouin light scattering system are under development. See this website for more information about the Illinois Materials Research Center: <https://mrsec.illinois.edu/>.

The qualities we are searching for in a PDRA for this project are a collaborative spirit, creativity, and demonstrated high impact accomplishments in experimental studies of the physics of materials. Direct experience with ultrafast optics and magnetism are of course desirable but not essential. Ideally, the PDRA would begin work before the summer of 2019; later start dates can be negotiated.

Interested applicants should send curriculum vitae with a list of publications and contact information for three professional references to Prof. David Cahill ([d-cahill@illinois.edu](mailto:d-cahill@illinois.edu)), Prof. Axel Hoffmann ([axelh@illinois.edu](mailto:axelh@illinois.edu)), and Prof. Virginia Lorenz ([vlorenz@illinois.edu](mailto:vlorenz@illinois.edu)).