Postdoctoral Position in Quantum and Optical Science
(Date of posting: 1/24/2020; Deadline: open till filled)

About the position

The group of Prof. Jennifer Choy at the University of Wisconsin–Madison (UW-Madison) invites applications for a postdoctoral research associate position in the areas of experimental quantum science, atomic-molecular-optical physics, photonics, and nanofabrication. The successful candidate will work on various research projects focusing on quantum sensing based on neutral atoms and solid-state color centers.

In addition to providing technical resources, Prof. Choy is committed to supporting the professional development of the research associate via guidance and opportunities for grant writing, project management, mentoring of students, manuscript preparation, external presentations, etc.

Position requirements

• PhD in Applied Physics, Physics, Electrical Engineering, Materials Science, or a related discipline
• Proficiency in experimental optics, along with experience in at least one of the following areas:
  - Quantum optics
  - Precision measurements with atoms or atom-like systems
  - Nanofabrication and characterization of optical devices
  - Multi-physics modeling and full-wave simulations of electro-optic devices
• Excellent oral and written communication skills
• Willingness to lead by example and promote a collegial and supportive group culture

How to apply

Applicants should email a brief statement of research interest (1-2 paragraphs), CV, and contact information for 2-3 references to Prof. Choy (jennifer.choy@wisc.edu).

About the lab

Research in the Choy group (https://choy.ep.wisc.edu/) focuses on the characterization and development of quantum systems based on neutral atoms and solid-state spin defects for sensing, and the application of nanophotonics to these systems in order to improve sensing performance and functionality. The Choy lab is conducting research in a recently furnished lab space equipped with instrumentation for rubidium spectroscopy and confocal scanning microscopy and is located in close proximity to shared facilities at the Wisconsin Centers for Nanoscale Technology and the Ion Beam Laboratory. The group is tightly connected to the quantum research community on campus via ongoing collaborations and activities under the Wisconsin Quantum Institute (https://wqi.wisc.edu/).

Prof. Choy is an Assistant Professor at the Department of Engineering Physics at UW–Madison since January 2019, with affiliate appointments in Electrical and Computer Engineering, Physics, Materials Science and Engineering, and the Wisconsin Quantum Institute. Prior to joining UW-Madison, she was a Principal Member of Technical Staff at Draper Laboratory, where she led developments of atomic and optical inertial sensors. She received S.B. degrees in Physics and Nuclear Engineering from the Massachusetts Institute of Technology in 2007, and a Ph.D. in Applied Physics from Harvard University in 2013.