Multiple PhD Research Openings

These positions are available immediately. Interested students should contact Prof. Bahl with a complete CV, accompanied by a short paragraph highlighting relevant practical experience and coursework. Women and students from minority backgrounds are encouraged to apply.

Contact information
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bahl@illinois.edu

Position 1: Electronic topological insulator systems

We are seeking a graduate student for experimental research on electronic metamaterial systems with an emphasis on topological insulators. A strong background in electromagnetics is required. Practical experience with RF, microwave, and mixed-signal circuits is highly desirable. General academic interest in quantum mechanics and physics is appreciated.

Research projects are closely related to the following recent papers --
https://www.nature.com/articles/nature25777
http://advances.sciencemag.org/content/4/6/eaat0232

Position 2: Opto-mechanical microsystems and nonlinear optics

We are seeking a graduate student for experimental research that explores optomechanical physics and nonlinear optics. Background in electromagnetics and/or optics is highly desirable, with a strong interest in micromechanics and acoustics. Experience with basic signal processing and frequency domain analysis is recommended.

Research projects are closely related to the following papers –
https://www.nature.com/articles/s41467-017-00247-7
http://www.nature.com/nphys/journal/vaop/ncurrent/full/nphys3236.html

Position 3: Nonlinear micromechanical (MEMS) metamaterials

We are seeking a graduate student for experimental research on mechanical metamaterial systems. Practical experience with microfabrication and with RF/electronic test and measurement are highly desirable. Familiarity with MEMS devices and underlying principles of electrostatics and piezoelectric transduction would be advantages. A general academic interest in quantum mechanics and physics is appreciated.