



## Undergraduate Research in the Terahertz Devices and Intersubband Nanostructures Laboratory

### Summary of project(s):

A volunteer position is available for an undergraduate in the Terahertz Devices and Intersubband Nanostructures Laboratory, led by Prof. Benjamin Williams. We are looking for motivated students, who are interested in getting hands-on experience in a research lab. We have various projects ongoing, including terahertz and mid-IR quantum cascade lasers, THz active metamaterials, nanowire nanomaterials and spectroscopy, and investigation of topological insulators using THz spectroscopy. The terahertz frequency range (1–10 THz,  $\lambda \sim 30\text{--}300 \mu\text{m}$ ) exists between the microwave and infrared frequency range, and is one of the last unconquered regions of the electromagnetic spectrum. If the project is successful, the possibility exists to transition into a longer term undergraduate research project and paid summer research position.

**Website:** <http://www.ee.ucla.edu/~bwilliam/>

### Required/recommended courses:

**Required:** EE101A

**Useful but not required:** E&M coursework (EE101B, EE16x), Solid-state and semiconductor device physics (EE121x, EE123x), Lasers and photonic devices (EE170x)

### Required/recommended skills or experience:

**Required:** Enthusiasm, curiosity, willingness to learn and work hard

**Useful but not required:** Machine shop fabrication, Labview and/or MATLAB programming

**Other Special requirements:** None.

**Date Position Available:** Spring quarter – possibility for summer research position

### How to apply:

Email your application materials to Prof. Williams at [bswilliams@ucla.edu](mailto:bswilliams@ucla.edu)

Curriculum vitae or resume, transcript (informal is OK), brief statement (1-2 paragraphs) of career interests/goals

**Listing expires on:** March 31 2014.