



Research Scientist, Postdoctoral Scientist or Graduate Student In Embedded Control of TI Digital Light Processors (DLP)

ElectroOptics Research Institute and Nanotechnology Center
University of Louisville, Louisville, KY

We are developing a high speed imaging system that uses Texas Instruments Micromirror Technology (DLP) to multiplex selected regions of interest in IR scenes to high speed photodetectors, providing the ability to recognize sub-pixel objects based on their temporal spectra. This system has a wide number of applications in remote sensing and homeland security. Key to optimizing or customizing system performance for each application is the algorithm development related to partitioning code between the on-board FPGA, and attached computers and DSP processors.

A full-time research engineer, postdoctoral scientist or graduate student is desired to lead in the integration of software, firmware and computer control of this system, in collaboration with a team of optical scientists. In addition to experience with VHDL coding of a Virtex chip, experience with C and Matlab is required. Experience with multidimensional signal processing, digital signal processing or digital communications is considered highly desirable for this position. Experience with optical signal processing, optical breadboarding, microoptics, SLM's or IR imaging and related areas, is also considered desirable, but not required.

Optics scientists may also wish to inquire about positions for complementary electrooptical design, breadboarding and characterization studies of the system.

NOTE: This project requires American citizenship or permanent resident status

To apply, send a single pdf file including CV plus contact information of three references to Bhfac01@louisville.edu