

Opportunities in the Biophysics and Physiology Group

Post-doctoral Fellow:

Our group is seeking post-doctoral fellow for research in advanced areas of Biophysics and Physiology which includes Biophotonics (near-field, multiphoton microscopy; Fluorescence/Raman and force spectroscopy; Optical tweezers, spanners and scissors); atomic force microscopy and optogenetics. Skills in Computational methods; control and automation of instruments, and (laser)-microscopy will be required. Knowledge of Cell culture/ Animal handling, molecular biology techniques is desirable. The fellow will have the opportunity to work with existing and future collaborations with Bioengineering and Life sciences department in various campuses of University of Texas (Arlington, Dallas, and Southwestern Medical center); University of California (Davis, Irvine and San Diego) as well as several other national and international institutions. Please send your CV with three references and two publications to Prof. Samarendra Mohanty at smohanty@uta.edu.

We are also interested in having visiting Professors /Scientists (on sabbatical) in our group.

PhD Positions:

New PhD position for following projects (starting spring 2010 onwards):

- Optical (Optogenetic and other hybrid method based) stimulation of cells combined with optical (Ca-imaging)/electrical (Patch clamp) detection for control and understanding of cellular/ animal physiology.
- Multimodal micro/nano-imaging platform (Far/Near-field, Multiphoton and Digital Holographic microscopy combined with atomic force microscopy) for characterization of material/ cells.
- Optical manipulation and microfluidic actuation (Fiber optical trap, Optical tweezers, Laser scissors, Optical Spanner and transporter) for cellular biophysics/material processing.
- Fabrication and organization (using conventional/two-photon polymerization and spatially sculpted optical tweezers) of microstructures in order to understand interaction between materials (including cells) for sensing applications.
- Optical (Elastic scattering and time-resolved Fluorescence / Raman) spectroscopic characterization for probing alterations/ interactions at micro/nano level.

Various fellowships (Teaching and research assistantship) are available to selected candidates. The applicants would be required to be enrolled in PhD program in Physics department. Extremely motivated students with degrees in Bioengineering, Material Science & Engineering with high motivation in Biophysics and Physiology research are also encouraged to apply. Please contact Prof. Samarendra Mohanty at smohanty@uta.edu.

Interested students and Postdocs are encouraged to apply for various Scholarships (Full bright, NSF, NIH, and other international collaborative schemes with respective countries).