Mimicking Submicron Features of Life in Micro+Nanotechnologies

The basic building blocks of flesh and bones depict submicron features. Cancer cells break apart from a primary tumor once there is a nutritional crisis in the tissue. These metastatic cells pass through layers of tissue and fat to get to the bloodstream. A new dimension to solid-state device fabrication at micro and nanometer scales is emerging that mimics what rogue cells do. The probing, detection, and characterization of biological entities is bound to unravel disease pathways at both molecular and cellular scales. This seminar will discuss work on the early detection of cancer at molecular and cellular scales. The integration of biomedical engineering, nanoscience, and nanotechnology with the living aspect differentiates focus in diverse areas like nanomanufacturing, molecular diagnostics, and chip-based recognition of cancer cells.

ABOUT THE SPEAKER

Dr. Samir M. Iqbal received his bachelor’s in electrical engineering from NED University of Engineering and Technology, Pakistan, and his Ph.D. from Purdue University in 2007. He worked as a post-doctoral research associate in the Discovery Park at Purdue University before joining the University of Texas at Arlington in 2007. Dr. Iqbal runs the GAANN Fellowship Program in the university’s Bioengineering Department where he holds a courtesy appointment. A senior member of IEEE, Dr. Iqbal has received a number of awards, including a CAREER Award from the National Science Foundation.

WEDNESDAY, JULY 23, 2014
2-4 pm, 310 Kelly Hall