



JOHNS HOPKINS
BIOMEDICAL ENGINEERING



Monday September 29, 1:00PM, Clark 110 (Homewood Campus)
Light lunch will be provided at noon



Sensing by touch: Contact-mediated signaling in embryos and chips

Andre Levchenko, Ph.D.

Associate Professor

Department of Biomedical Engineering
Johns Hopkins University

Abstract: Living cells possess an exquisite ability to sense changes in their environment and respond to those changes in a way most consistent with their survival and specialized function. In particular, the changes can be produced by the presence of other cells in the immediate micro-environment leading to sophisticated cell-cell interaction events. In this talk, I will focus on the ability of cells to monitor the state of their micro-environment 'by touch', i.e., through immediate contact with other cells or with the substratum. In particular, I will focus on three different settings, in which these sensory events can have dramatic consequences: development of red blood cells in the early embryos, cell-cell communication during angiogenesis and cell guidance by well organized extracellular matrix. I will highlight the use of advanced microfluidic technologies and computational modeling in unraveling the complexity of the corresponding cellular behaviors.

For more information call 410-516-7903

<http://www.bme.jhu.edu>