

## Mechanical Property Characterization for 3D Collagen Cancer Cell Cultures

**Yue Wang, M-CNTC Trainee**

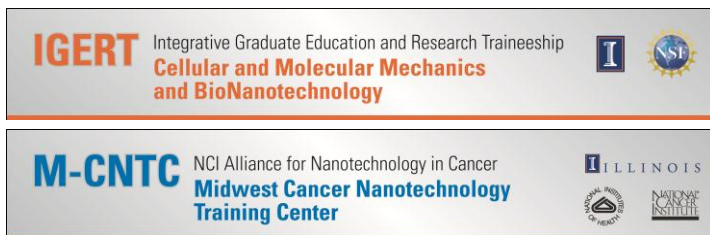
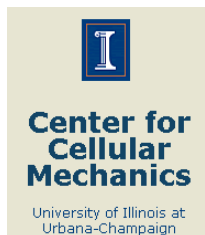
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**Date:** Tuesday, September 11, 2012  
**Time:** 12:00 – 12:30 p.m. CST (10:00 – 10:30 a.m. PST)  
**Location:** 1000 MNTL at Illinois (SSM 150 at UC Merced)

### Abstract:

The tumor microenvironment is mechanically modified during cancer progression. Imaging of tumor mechanical environment will provide new information for early cancer diagnosis. However, it is less clear how the mechanical environment is tuned in cancer. The goal of this study is to understand more clearly the contrast mechanisms of elasticity images in terms of molecular and cellular activities that drive cancer. Two imaging modalities (ultrasound and OCT) were implemented. These techniques have shown promise for discrimination between benign and malignant breast lesions, liver fibrosis staging and so on. This talk will focus on developing the imaging technique to image the mechanical properties in 3D collagen hydrogel with cancer cell cultures. The success of this new technique will provide quantitative mechanical property information of ECM in the cellular level, and hopefully could monitor the mechanical influence during cancer progression and metastasis.

### Seminar Presented by:



**CNST** University of Illinois Center for Nanoscale Science and Technology