



# IEEE-EMBS/ASME Workshop on Modeling and Measurement of Mechanical Properties of Cells and Proteins

Drexel University, Philadelphia, PA  
162 Curtis Hall

Thursday, September 14, 2006 – Saturday, September 16, 2006

## Sponsoring organizations:



### Tracks:

1. **Nanoscale imaging and manipulation (NIM)**
2. **Cellular computation (CC)**
3. **Cell and tissue engineering (CTE)**

### Thursday, September 14, 2006

- 8:00 -9:00     Keynote: David Odde, University of Minnesota, “*Cellular Force Transduction*”
- 9:00 – 10:00   **1a. (NIM) Bradley Layton, Drexel University, “*Cell and Protein Mechanics*”**
- 10:00 – 11:00   **2a. (CC) Cameron Abrams, Drexel University, “*Protein Mechanics*”**
- 11:00 – 12:00   **3a. (CTE) Wei Sun, Drexel University, “*Computer Modeling of Tissue Structure*”**
- 12:00 – 1:00    Lunch
- 1:00 – 5:00     Workshops: Layton, Abrams, Sun.

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*Hosted by:*

*Greater Philadelphia Bioinformatics Alliance (GPBA)*  
*Drexel University Department of Mechanical Engineering and Mechanics (DUMEM)*  
*Drexel University School of Biomedical Engineering, Science and Health Systems (DUBME)*

## Friday, September 15, 2006

- 8:00 – 10:00 Plenary: Aydin Tozeren, Drexel University, “Bioinformatics for Cellular Phenotype Prediction”
- 9:00 – 10:00 1b. (NIM) Kenneth Barbee, Drexel University, “Nanoscale Cellular Mechanics”
- 10:00 – 11:00 2b. (CC) Franco Capaldi, Drexel University, “Modeling the Mechanical Properties of Vein Grafts”
- 11:00 – 12:00 3b. (CTE) Moses Noh, Drexel University, “Microfluidic Devices for Cell Studies: Dielectrophoretic Manipulation of Cells”
- 12:00 – 1:00 Lunch
- 1:00 – 5:00 Workshops: Barbee, Capaldi, Noh

## Saturday, September 16, 2006

- 8:00 – 9:00 Plenary: Yury Gogotsi, Drexel University, “Nanofluidics”
- 9:00 – 10:00 1c. (NIM) Jaydev Desai, Drexel University, “Force Feedback Interface for Cell Manipulation”
- 10:00 – 11:00 2c. (CC) Bahrad Sokhansanj, Drexel University “Cell Dynamics During Inflammation: Modeling Oxidative Stress Damage to Microtubules”
- 11:00 – 12:00 3c. (CTE) Todd Doehring, Drexel University “Cellular Scale Imaging and Strain Measurement of Collagen Microstructures During Tensile Testing”
- 12:00 – 1:00 lunch
- 1:00 – 5:00 Workshops: Desai, Sokhansanj, Doehring

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**Fees:** (includes continental breakfast, coffee, and lunch)

*talks only:* \$300 (IEEE-EMBS, ASME members), \$350 non-members

*talks and laboratory workshops:* \$450 (IEEE-EMBS, ASME members) \$500 non-members

*students:* \$100

**Participation is limited to 20 full attendees.**

Certificates will be granted to all who complete the workshop.

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