

Biomedical Engineering Seminars Fall 2008

Sept 8, Kenneth McLeod.
Logistic, and mechanism of evaluation

Sept 15, Examples of professional 20 minutes presentations
Walker Land - Computer aided diagnostic in cancer
Jacques Beaumont - Modeling impulse propagation in the heart

Sept 22 Mark Zhang
Pattern Analysis and Knowledge Discovery

I will introduce the projects and achievements people in my lab have made recently centering around the theme of pattern analysis and knowledge discovery. My research focuses on multimedia information indexing and retrieval, data mining and knowledge discovery, and computer vision and image understanding. The work I will be talking about addresses all these areas.

Zhongfei (Mark) Zhang is a local speaker laboring in Computer Science Department of the same school. See www.cs.binghamton.edu/~zhongfei/ for more information about him and his research.

Sept 29 Holiday: Hashanah

Oct 6, Ron Miles
Development of novel biologically-inspired directional microphones

The development of novel directional microphones for hearing aids is described. The mechanisms underlying the design of these unusual microphones were inspired by our earlier study of the ears of the parasitoid fly *Ormia ochracea*. The structure of *Ormia's* ears inspired new approaches to the design of directional microphones that are more sensitive and have lower thermal noise than existing miniature microphones. Microphones have been fabricated out of silicon that employ optical sensing to convert the diaphragm motion into an electronic signal. Measured results indicate that the directivity of these microphones is very similar to that of an ideal first-order differential microphone and that their noise floor is much lower than what has been achieved with existing technology. Results are also described where a simple electronic feedback scheme is used to improve the dynamic response of the microphone while maintaining a low system noise floor.

Oct 13, Entrepreneur workshop

Oct 20, Alda Mizaku and Thomas Raway,
Computer aided diagnostic in cancer.

Oct 27, Ashley Raba and Heike Sichtig
Cardiac modeling, and spiking neural networks.

Nov 3, Ayanna Goddard, Mike Vincent
The treatment of low blood pressure, and tissue engineering.

Nov 10, Josh Brandoff, Kate Fletcher <<< Cancelled >>>>
Multi-Agent Robotic Stigmergy with Applications, and the design of an orthopedic prosthesis for the knee.

Nov 17, Kate Fletcher Sushant Agrawal
The design of an orthopedic prosthesis for the knee.
Bioelectric implants.

Nov 24, Guru Madhavan, and Mike Vincent
The treatment of low blood pressure.

Dec 1, Alda Mizaku and Thomas Raway
Computer aided diagnostic in cancer.

Dec 8, Ashley Raba and Ruta Paranjape
Cardiac modeling. Clinical interventions for the treatment of low blood pressure

Dec 15, Ayanna Goddard and Kate Fletcher
The treatment of low blood pressure, the design of an orthopedic prosthesis for the knee.

**In Spring 09 the seminars will be from
Wednesdays 12:00 to 1:30**

Jan 28, 2009, Josh Brandoff and Heike Sichtig
Multi-Agent Robotic Stigmergy with Applications.
Spiking neural networks