Engineering Neuroscience & Health

Department of Biomedical Engineering Division of Biokinesiology and Physical Therapy

ENH SEMINAR SERIES

Presents:

Dr. Beth Pruitt

Stanford University

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Monday

September 14, 2009

4:00 p.m.

Refreshments will be served 3—4 pm

"MEMS, mechanobiology & touch"

Beth Pruitt, PhD
Assistant Professor
Department of Mechanical Engineering
Stanford University

MEMS tools are ideal to interface electrical, mechanical and biological systems and to integrate from the macro to nanoscale. This talk will include an overview of research and engineering activities on MEMS_based devices for micro and nanoscale force detection and our studies of mechanotransduction at the organism and cellular level. I will discuss design issues for piezoresistive force sensing cantilevers, the development of force clamps based on these MEMS sensors, and the study mechanotransduction and biomechanics affecting the sense of touch in the model organism *C. elegans*.

I will also discuss recent work on the mechanics and behavior of individual cells to understand how the mechanical environment mediates the biomechanics and response of adhesion, force generation, renewal and differentiation.

Beth Pruitt received her BS from MIT in 1991, MS from Stanford in 1992, was an office in the US Navy from 1992-1997, and received her PhD in 2002 from Stanford University for work on Piezoresistive Cantilevers For Characterizing Thin_Film Gold Electrical Contacts. She then joined the Laboratory for Microsystems and Nanoengineering at the Swiss Federal Institute of Technology (EPFL) where she worked on nanostencils and polymer MEMS. She joined the Mechanical Engineering faculty of Stanford in Fall 2003.

Locations:
Seminar is simultaneously presented

UPC: HNB 100 – LIVE

Hedco Neurosciences Building

UPC Campus Map/Directions:
http://www.usc.edu/about/visit/upc/

HSC: CHP 147— Video Conference

Center for the Health Professional

HSC Campus Map/Directions:
http://www.usc.edu/about/visit/hsc/

Organized by Professor Francisco Valero-Cuevas http://bme.usc.edu/valero/

Web Cast

http://capture.usc.edu/college/Catalog/?cid=af180d48-ceff-42b9-a35c-eb199daed320

Information about all seminars can be found at
http://bme.usc.edu/valero/ENH/ENH-Schedule.html