Engineering Neuroscience & Health

Department of Biomedical Engineering Division of Biokinesiology and Physical Therapy

ENH SEMINAR SERIES

Presents:

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Monday

February 13, 2012

4:00 p.m.

Pizza will be served: 3:30— 4 pm

"Ultrasound in Tendons, Blood, and the Brain: Uncovering Clinical Information with Spectral Analysis"

Gregory Bashford, Ph.D.
Associate Professor
Department of Biological Systems Engineering and Biomedical Engineer
University of Nebraska-Lincoln
http://bse.unl.edu/faculty/bashfordg.shtml

Ultrasound is a real-time, non-ionizing medical diagnostic imaging modality ubiquitous in the States. Our laboratory is currently interested in several applications where useful clinical information can be "hiding" from the normal visual response of human observers. Although a fairly conventional engineering tool, spectral analysis is still finding new uses in the increasingly complex physiological world. In this presentation, you will have the opportunity to learn about recent research in 1) the micro-morphology of tendons and how the ultrasound echo pattern can be used to detect and quantitate tissue damage, 2) estimation of blood flow velocity when the target (blood) is moving relative to the scanning device, and 3) estimation of pulsatility and resistive indices in the middle cerebral artery (brain) during periods of rest, exercise, and cognitive tasks as a proxy for functional imaging.

Locations: *Seminar is simultaneously presented*

UPC: HNB 100 — Video Conference
Hedco Neurosciences Building
UPC Campus Map/Directions:
http://www.usc.edu/about/visit/upc/

HSC: CHP 147 – LIVE
Center for the Health Professional
HSC Campus Map/Directions:
http://www.usc.edu/about/visit/hsc/

Organized by Professor Francisco Valero-Cuevas http://bbdl.usc.edu/ENH

Web Cast
http://capture.usc.edu/college/Catalog/pages/catalog.aspx?catalogId=946350f1-ca84-40e7-b867-e16adba01e4e

Information about all seminars can be found at
http://bbdl.usc.edu/ENH