USC Viterbi School of Engineering

USC Division of Biokinesiology and Physical Therapy

ENGINEERING, NEUROSCIENCE & HEALTH

Presents:

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4:00 pm

Variability, Compensation, Modulation, and Homeostasis in a Rhythmic Neuronal Network

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ENH SEMINAR SERIES

Neurons and networks must constantly rebuild themselves in response to the continual and ongoing turnover of all of the ion channels and receptors that are necessary for neuronal signaling. A good deal of work argues that stable neuronal and network function arises from homeostatic negative feedback mechanisms. Nonetheless, while these mechanisms can produce a target activity or performance, they are also consistent with a good deal of recent theoretical and experimental work that shows that similar circuit outputs can be produced with highly variable circuit parameters. This work argues that the nervous system of each healthy individual has found a set of different solutions that give "good enough circuit performance. I will describe a new theoretical model for cellular homeostasis that gives insight into a variety of experimental observations.

Organized by Professor Francisco Valero-Cuevas

Locations: *Seminar is simultaneously presented*

UPC: HNB 100 - Live
Hedco Neurosciences Building
UPC Campus
Map/Directions: http://www.usc.edu/about/visit/upc

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

Web Cast
http://capture.usc.edu/college/Catalog/?cid=af180d48-ceff-42b9-a35c-eb199daed320
Organized by Professor Francisco Valero-Cuevas http://bbdl.usc.edu/ENH