

Computational & Life Sciences/ Center for Comprehensive Informatics Spring 2009 Seminar Series

3/3/2009

10:00am

Dr. Roberto Fernandez Galan

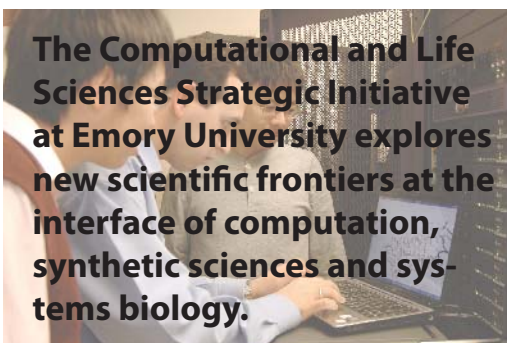
Case Western Reserve

Location: Whitehead Auditorium

“Neural Codes with Reliable Temporal Precision: Studies on the underlying biophysical mechanisms”

Abstract:

Neurons encode and process sensory information in the form of spatiotemporal activity patterns. The implementation of these temporal codes in the brain requires neurons to be capable of following a stimulus with millisecond precision, as well as of responding consistently to repetitions of the same stimulus. I will summarize recent experimental, computational and mathematical work revealing the biophysical properties of neurons that allow them to encode sensory information in a reliable, reproducible fashion. Time permitting, I will also talk about mechanisms underlying reliable neural dynamics at the network level.



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