

BI-CO MATHEMATICS COLLOQUIUM

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"Mathematical Modeling of Neurons: from Data to Discovery"

Monday, February 29, 2016

Talk at 4:00 – H109

Tea at 3:30 – KINSC Math Lounge, H208

Abstract:

The brain is too complex to be understood through experiments with animals or brain tissue alone. We will show how to build mathematical models that reproduce data recorded in the laboratory. Studying these “virtual cells” can help to uncover how properties of individual neurons affect their function, and how neurons communicate. My simulations have been essential to new research relating the shape and function of cortical neurons of the rhesus monkey, the laboratory species closest to humans.

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