

STATISTICS COLLOQUIUM

MONDAY, JANUARY 29, 2007

TALK: 4:00 PM — SCIENCE CENTER RM. 705

RECEPTION: 5:15 PM — SCIENCE CENTER, 7TH FLOOR

“Modeling the Video Microscopy of Sparks”

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ABSTRACT

The dynamics of cell electrical activity can be observed through the use of fluorescent dyes, laser illumination, and video microscopy. The resulting dataset is a video record. "Sparks" are an observational phenomenon of particular interest to biologists studying the electromechanical properties of cells. By using knowledge of imaging systems to create a model of a spark and to characterize the noise processes, we can improve estimation and detection accuracy of spark events.