



Programa de Pós Graduação em Modelagem Computacional



Ciclo de Palestras

(05/2012)

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HORÁRIO: 10 horas
LOCAL: Anfiteatro 03 – Prédio Engenheiro Itamar Franco
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“Reentry near the percolation threshold in a heterogeneous discrete model for cardiac tissue”

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Abstract:

Arrhythmias in cardiac tissue are related to irregular electrical wave propagation in the heart. Cardiac tissue is formed by a discrete cell network, which is often heterogeneous. It is shown by extensive simulation in a discrete model of cardiac tissue that a wave crossing a heterogeneous region of cardiac tissue may breakup and produce irregular patterns, provided the fraction of non-conducting links is close to the percolation threshold of the cell network. A localized region with non-conducting links surrounded by homogeneous tissue can become a source of reentry and ectopic beats in the whole system.