

Seminar Series

Entrained collective rhythms of multi-cellular systems

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Date: November 30, 2009 (Friday)

Time: 13:30pm - 2:20pm

Venue: Room B5-307, 5/F, Academic Building

ABSTRACT

Biological cells are continuously subjected to both intrinsic rhythms generated by intracellular clocks and extrinsic driving emanating from the extracellular environment. Elucidating collective behavior of cells has attracted much research attention in recent years. In this talk, a control strategy for non-biological systems will be explained that has been developed to emulate entrained collective rhythms of a multi-cellular biological system for cases when spontaneous rhythms cannot be achieved. The synthetic multi-cellular network model with simulation results will be presented to illustrate the effectiveness of the results obtained.

BIOGRAPHY

Yonghui Sun received his BSc degree in mathematics from Henan University (2004) and MSc degree in Applied Mathematics from Southeast University (2007). Currently, he is a PhD candidate in the Department of Manufacturing Engineering and Engineering Management, City University of Hong Kong, where he works with Prof Gary Feng. His research interests include systems biology and stochastic control.

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All are welcome!