

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Marc Thiriet**

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报告题目:

**Mathematical Model and Simulation
of Acupuncture**

邀请人: 戴小英 副研究员

报告时间: **2013 年 6 月 8 日 (周六)**

上午 10:00-11:00

报告地点: 科技综合楼三层 **311**

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Abstract:

Acupuncture effects result from a set of signals sent from activated mastocytes at given acupoints to local nerve endings, capillaries, heart, and brain. Mastocytes are activation by a mechanical stress field, heating, or a electrical field. The mechanical stress is modeled by a compact-supported function. The mathematical model is a system of 5 parabolic partial differential equations. Its simplest form describes the evolution of the density of mastocytes and the chemoattractant concentration. A mathematical analysis leads to a theorem for blow-up condition as well as an analytical solution useful for validation. Numerical simulations are also carried out using a finite element method with mesh adaptivity.

欢迎大家参加!