Applied Mathematics

McGill & CRM Applied Mathematics Seminar

2:35 pm Monday 23rd February 2004
At McGill, Burnside Hall 1205

"Numerical modelling of electrophysiological waves with bidomain models"

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Coffee and refreshments will be served after the seminar

Abstract: Bidomain models are reaction-diffusion equations used to model electrophysiological waves in anisotropic tissues such as the myocardium. The bidomain approach relies on two potential waves at each point to represent the electrical activity in the tissue. It is now among the most sophisticated continuum-based models to simulate the action potential in the heart. The talk will introduce the bidomain models and present some of their mathematical characteristics. A finite element method and numerical results will also be presented.