

The Department of Biomedical Engineering

Presents:

**Insights from accurate modeling of structural and functional
heterogeneities in cardiac tissue**

By

Brock Tice, Ph.D.

Vice President of Operations

CardioSolv, LLC

ABSTRACT:

Until recently, most cardiac electrophysiology simulations were composed of homogeneous or very simplified heterogeneous tissue, and three dimensional simulations employed simple geometric models or smooth, low resolution models derived from animal organs. Our work in the last few years has focused on incorporating realistic electrophysiological and structural heterogeneities into models of cardiac tissue, and employing the resulting models to improve our understanding of disease and therapy. Simulation of arrhythmogenesis in acute regional ischemia phase 1a, as well as low-voltage termination of polymorphic ventricular tachycardia in a microstructurally realistic rabbit ventricle will be discussed.

3:35 – 4:30 P.M.

Monday, October 19, 2009

Room 2-101 NHH

BME n 8601 Graduate Seminar

For information, contact Rachel Boehme at bmengp@umn.edu , 612-624-8396.