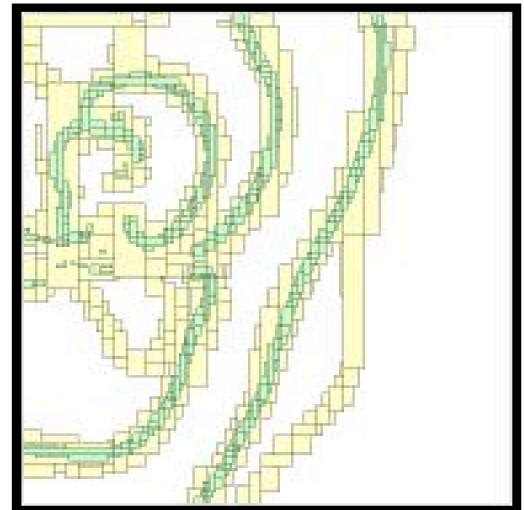
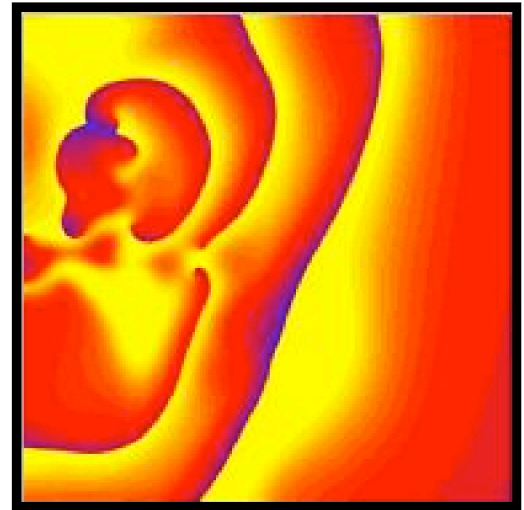


The Oliver Club

www.math.cornell.edu/~oliver/

Nonlinear Dynamics in the Heart: Modeling, Simulating, and Visualizing Arrhythmias

The heart is an excitable system, with electrical waves propagating in a coordinated manner to initiate a mechanical contraction. In pathologic states, normal electrical wave propagation can be disrupted by pre-existing regions of heterogeneous cellular properties or by spiral and scroll waves that develop as a consequence of rapid pacing along with the nonlinear dynamics of the system. This talk will describe how such arrhythmias can be modeled mathematically, simulated in simplified and realistic geometries, and visualized in three-dimensional movies and interactive programs.



Elizabeth Cherry

Cornell University

Refreshments will be served at 3:55 PM in the Mathematics Department lounge (532 Malott Hall).

Thursday, March 8, 2007
at 4:25 PM in 406 Malott Hall