



Applied Mathematics



McGill & CRM Applied Mathematics Seminar

2:35 pm Monday 10 November 2003

At McGill, Burnside Hall 1205

“Some FitzHugh-Nagumo Type Equations”

Erik S. Van Vleck

Department of Mathematics

University of Kansas

evanvleck@math.ukans.edu

www.math.ukans.edu/~evanvleck

Coffee and refreshments will be served after the seminar

Abstract: We consider traveling pulse and front solutions for FitzHugh-Nagumo type equations, a reduced version of the Hodgkin-Huxley equations with diffusion that model the ionic conductances generating the action potential in nerve fibers. Differences from the standard model include the use of a discrete diffusive term to model action potentials in myelinated nerve fibers and a nonlinear term that allows for turning point behavior.

This talk represents joint work with Chris Elmer (New Jersey Inst. Tech.) and Weishi Liu (Univ. of Kansas).

