

VCU Mathematics Colloquium

Patterns of Phase-Shift Synchrony: From Animal Gaits to Binocular Rivalry

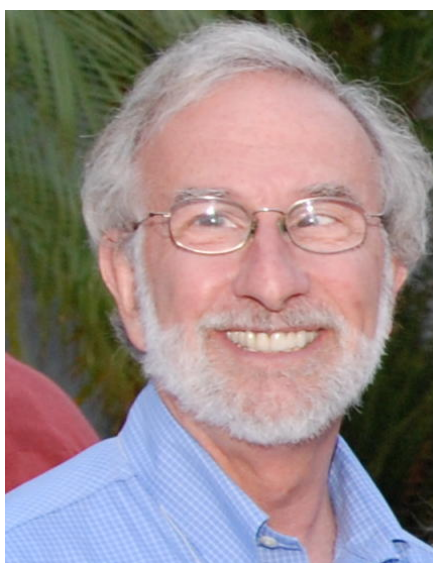
Prof. Martin Golubitsky

Director, Mathematical Biosciences Institute,
The Ohio State University

Friday, February 6

3:00-4:00

Academic Learning Commons 2201



This talk will discuss previous work on quadrupedal gaits and recent work on a model for binocular rivalry proposed by Hugh Wilson. Both applications show how rigid phase-shift synchrony in periodic solutions of coupled systems of differential equations can help understand high level collective behavior in the nervous system. For gaits the symmetries predict unexpected gaits and for binocular rivalry the symmetries predict unexpected percepts.