

Steve Pederson
Ph.D., Georgia Tech

RESEARCH INTERESTS:

- Dynamical Systems
- Fuzzy Processes

CURRENT RESEARCH: I am working on numerical methods for hybrid fuzzy differential equations (with M. Sambandham) and the orbit structure of fuzzy differential equations.

SELECTED PUBLICATIONS:

- *Fuzzy homoclinic orbits and commuting fuzzifications*, Fuzzy Sets and Systems 155 (2005) 361-371.
- *Homoclinic Orbits in Self-Mappings of a Space of Fuzzy Sets*, Proceedings of NAFIPS 2005, IEEE Press, 2005.

RECENT SENIOR SEMINAR PROJECTS SUPERVISED:

- Pseudometrics (Fall 2005)
- Fuzzy Differential Equations (Fall 2005)
- Solving Partial Differential Equations via the Laplace Transform (Spring 2006)
- Formation of Shock Waves in Conservation Laws(Spring 2006)

OTHER STUDENT PROJECTS RECENTLY SUPERVISED:

- A Study of Standard Circle Maps (2004 Harriett J. Walton Symposium on Undergraduate Mathematics Research)
- An Illustration of the Poincare-Bendixson Theorem (2005 Harriett J. Walton Symposium on Undergraduate Mathematics Research)
- A study of a one-dimensional dynamical system (2005 Harriett J. Walton Symposium on Undergraduate Mathematics Research)
- Formation of Shock Waves (2006 Harriett J. Walton Symposium on Undergraduate Mathematics Research)