Wake Forest University

Department of Mathematics
and Computer Science

The Gentry Lectures

Professor Jack Hale
Director of Center for Dynamical Systems
and Nonlinear Studies
Georgia Tech

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Elementary Dynamics and Bifurcations
Using scalar and two dimensional ordinary differential equations, we discuss
the elementary static bifurcation of equilibrium points (fold and cusp) and
dynamic bifurcation to a periodic orbit. Differential equations often are solved
on a computer and we consider the relationship between the computer output
to the true solution of the differential equation, encountering the Feigenbaum
cascade of bifurcations and chaos.

November 3, 1993
DeTamble Auditorium of Tribble Hall
4:00 p.m.

Asymptotic Behavior of Dissipative Systems
We introduce the basic concepts of dissipation and global attractors in
dynamical systems and give several applications in both finite and infinite
dimensions. The discussion will center around the simpler gradient systems
for which the equilibrium points and their stable and unstable manifolds play a
major role.

November 4, 1993
Babcock Building, Room 17
4:00 p.m.

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Refreshments served both days at 3:00 p.m. in Babcock Room 310.