

WICHITA STATE UNIVERSITY
Department of Mathematics and Statistics

*The Lecture Series in the
Mathematical Sciences Presents Our Guest:*

Prof. Christian Wolf
Wichita State University

*" Measures of Maximal Dimension for
Hyperbolic Diffeomorphisms "*

Abstract:

We establish the existence of ergodic measures of maximal Hausdorff dimension for hyperbolic sets of surface diffeomorphisms. This is a dimension-theoretical version of the existence of ergodic measures of maximal entropy. The crucial difference is that while the entropy map is upper-semicontinuous, the map $\nu \mapsto \dim_H \nu$ is neither upper-semicontinuous nor lower-semi-continuous. This forces us to develop a new approach, which is based on the thermodynamic formalism. Remarkably, for a generic diffeomorphism with a hyperbolic set, there exists an ergodic measure of maximal Hausdorff dimension in a particular two-parameter family of equilibrium measures.

Friday, September 26, 2003
3:00 PM in 372 Jabara Hall

*Please come join us for refreshments before the lecture
at 2:30 p.m. in room 353 Jabara Hall.*