Course Description

Chaos, along with Relativity and Quantum Mechanics, have been identified as the 3 greatest scientific discoveries of the 20th century. This research seminar presents a self-contained introduction to the latest advances on chaos, along with its many manifestations involving fractals, complexities, and a new kind of science a la Wolfram.

The goal of this course is to introduce these very active research areas to a broad audience without imposing any pre-requisites. The emphasis will be on concepts and applications. Some essential background from nonlinear dynamics will be introduced as needed. Many results to be presented, such as local activity and time-reversality, have broad applications from brain science to cosmology.

“I think the next century will be the century of complexity”.

- Stephen Hawking