

Fractals, Chaos, Complexity

A Course in the Science of Nonlinear Complex Systems

Physics-EPS 30
Winter Quarter 2020

Instructor: John Rundle, Departments of Physics, EPS, Applied Math

Topics:

- Introduction
- Fractals
- Iterated functions
- Nonlinear systems
- Time series
- Mandelbrot set
- Cellular automata
- Neural networks
- Probability
- Application to financial markets
- Cryptography and Blockchains