



FALL 2012

CHAOTIC DYNAMICS: COURSE SYLLABUS (PHYS 715, ENEE7890)

Class: Tues., Thurs.; 11:00 to 12:15; PHY. 1204

Instructor
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Course Content: One dimensional maps, strange attractors, fractal dimension, embedding, Lyapunov exponents, entropy, controlling chaos, fractal basin boundaries, chaotic scattering, Hamiltonian chaos, quantum chaos, chaos in fluids.

Textbook: 'Chaos in Dynamical Systems' by E. Ott (Cambridge University Press, 2nd edition)

Homework/Exam:
Homework set #1 due Oct. 9
Homework set #2 due Nov. 8
Exam Dec. 4
Homework set #3 due Dec. 11
Term paper due Dec. 18

Grading: Homeworks 50%, Exam 25%, Term paper 25%.

Web page:
http://www.physics.umd.edu/courses/Phys715/Phys715_Fall12.html