Chaotic Dynamics: Course Syllabus

Fall 2018

Class

* Tuesday, Thursday: 2:00 P.M. – 3:15 P.M.
* Room PHYS 1219 (Toll Building)

Instructor

* Edward Ott
* Room 3329 AVW Building
* Phone: 405-5033 (Office)
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TA’s

* Sarthak Chandra and Jaideep Pathak
* Rooms 3330 and 3336A, AVW Building
* [sarthakc@umd.edu](mailto:sarthakc@umd.edu) and jpathak@umd.edu

Course Webpage: ELMS Canvas – Physics 715

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. 4
* Homework set 2: due Nov. 6
* Exam: Nov. 15
* Homework set 3: due Dec. 6
* Term Paper: due Dec. 17

Grading

* Homeworks: 40%
* Exam: 40%
* Term Paper: 20%