

Exploring Complexity

In Science and Technology

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Jeff Fletcher

Logistics

- How many have USB drive?
- Typo in HW1 question 1
- Time for questions on HW1 towards end
- ISEPP tickets: <http://www.isepp.org/>
- Roll

Review 1

- What are examples of Complex Systems?
- What are common characteristics of Complex Systems?
- Large networks of simple interacting elements, which, following simple rules, produce emergent, collective, complex behavior.
 - Other ideas: robustness, unpredictability
- Core studies in the Science of Complex Systems
 - Dynamics, Information, Computation, Evolution

Review 2

- What is Systems Science?
- What was point of sorting yourselves?
 - [Other sort algorithms](#)
 - <http://www.sorting-algorithms.com/>

Examples of Chaotic Systems

- 3-body problem
 - <http://www.upscale.utoronto.ca/PVB/Harrison/Flash/Chaos/ThreeBody/ThreeBody.html>
- Double pendulum
 - Single:
<http://www.myphysicslab.com/pendulum1.htm>
 - Double:
http://www.myphysicslab.com/dbl_pendulum.html

Logistic Map (one version)

