

Complex Systems Lecture Series

Michael Macy, Cornell – collective social action and complexity (September 22 and 23) – 34 attendees

Melanie Moses, UNM – biological scaling and complexity (October 13 and 14) – 37 attendees

Melanie Mitchell, PSU – overview of complexity (based on her book, *Complexity: A Guided Tour*)
(October 20 and 21) – 58 attendees

George Kamberov, Stevens Institute of Technology – cybersecurity (February 18 and 19) - 11 attendees

Brian Knep, Harvard – emergent art (April 2) – 72 attendees

Brown Bag Lunch Presentations

Jim Pantaleone – *The Forces on a Ball in the Air* (January 27)

Janet Johnson – *Applying Systems Science Approaches to Health Issues* (February 10)

Mary Logan – *The Peak Oil-Climate Change Nexus* (February 24)

Papers & Conference Presentations

The Added Mass of a Spherical Projectile – J. Pantaleone and J. Messer
AM. J. Phys. 79, 1202 (2011)

Chemical Garden and a Zoo – J. Maselko & J. Pantaleone
“Chemical Garden Conference,” 2012

Conference Travel

Jerzy Maselko – Chemical Gardens Conference; Leiden, Netherlands; May 7-12 2012

Jim Pantaleone – 12th Experimental Chaos and Complexity Conference;
University of Michigan; May 16-19 2012

Curriculum Offered in AY12

Fall 2011: CS 405 (*Artificial Intelligence*) – 5 students

Spring 2012: CPLX 200 (*Introduction to Complexity*) – 12 students

Faculty Minigrant Awards

In April 2011 the following AY12 minigrants were awarded to UAA faculty:

- Jerzy Maselko/Jim Pantaleone: *Self-construction of chemical precipitation structures*
- Gunnar Knapp: *Dynamic graphics modeling of the Alaskan economy*
- David Bowie: *Modeling linguistic variation and change*
- Sun-Il Kim: *Design of a stand-alone network intrusion device*

Program Development

The Complex Systems Group will fund 25% of a new Computer Science/Complex Systems faculty position, to be appointed to the SOE and the Honors College. This position will teach the curriculum, provide curriculum development, and help coordinate interdisciplinary initiatives and research in AY13.

David Wooten, with the assistance of the Faculty Technology Center and various faculty members, is developing a 25 minute Planetarium show on *Chaos and Fractals* to be completed in AY13. If successful, this could lead to additional planetarium shows to introduce people to complexity and complex systems.