

Modern Mathematics: Mathematics Mini-Course, The State of the Planet: How Mathematics Can Help.

October 9, 2008

Organized By: Ricardo Cortez, Herbert Medina, Kathleen O'Hara, Ivelisse Rubio

Location: Salt Lake City, Utah, Salt Palace Convention Center

Location and Topics

This minicourse is to be held at the Salt Palace Convention Center located at 100 S. West Temple, Salt Lake City, Utah, directly preceding the Annual Meeting of SACNAS., the Society for Advancement of Chicanos and Native Americans in Science. This is a three hour mini-course aimed at undergraduates to be held in room 254 C from 9:00AM to noon.

Speaker: Mary Lou Zeeman, Professor Bowdoin College

The State of the Planet: How Mathematics can Help

The mathematical community offers a wealth of largely untapped resources for addressing problems related to the state of our planet.

For example, climate change research is full of mathematical challenges, ranging from continuous and stochastic dynamical systems, to inverse problems, data assimilation, efficient numerical numerical methods, quantifying uncertainty, and more. Global sustainability and resource management questions raise new classes of problems at the interface of mathematics, economics and computer science. Spread of disease and ecosystem preservation both take on new dynamic spatial components as species move poleward. Insight into tipping points can be provided by the language of bifurcation theory. This mini-course will describe how mathematics can play a role in understanding and addressing challenges faced by our planet. The mini-course is aimed at the undergraduate level and is open to all students regardless of their majors.