

INSTITUTE FOR PURE AND APPLIED MATHEMATICS (IPAM)

in conjunction with the IoE, JIFRESSE, IGPP, the Department of Mathematics, and the Department of Atmospheric and Oceanic Sciences presents



A Public Lecture:

Climate Change and the Mathematics of Sea Ice

Kenneth Golden

Professor of Mathematics, University of Utah

Wednesday, April 29, 2009, 4:30 pm, in LaKretz 110

Light refreshments outside the lecture hall starting at 4PM.

Reception at IPAM immediately following the lecture.

Abstract

Earth's sea ice packs are acute indicators as well as agents of climate change. They also serve as primary habitats for robust algal and bacterial communities which sustain life in the polar oceans. Fluid flow through porous sea ice mediates ice growth and melting, biomass build-up, and the reflection of solar radiation. We will describe recent advances in using mathematics to understand such critical processes, and related electrical properties of sea ice important in monitoring its thickness. Video from a 2007 Antarctic expedition where we measured fluid and electrical transport in sea ice will be shown.

The Speaker

Kenneth Golden's scientific interests lie in composite materials, sea ice, and phase transitions. He has published 45 papers in mathematics, physics, geophysics, electrical engineering and mechanical engineering journals, and given over 200 invited research lectures on six continents, including two presentations in the US Congress. Dr. Golden has journeyed on five Antarctic and five Arctic expeditions to study sea ice. He received his Ph.D. in Mathematics at the Courant Institute of NYU in 1984. Prior to moving to Utah in 1991, he was an Assistant Professor of Mathematics at Princeton University, and a National Science Foundation Postdoctoral Fellow at Rutgers University in mathematical physics. His research has been covered by the media in newspaper, magazine, and web articles, and he has been on both radio and television.

This lecture is part of the IPAM workshop "Flows and Networks in Complex Media" For more information about this lecture (including directions and parking) and the workshop, visit our website or call (310) 825-4755.

www.ipam.ucla.edu/programs/ktws3/golden.aspx



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