

# MCRN

Mathematics and Climate Research Network

PUBLIC LECTURE  
AND  
RECEPTION

## MATHEMATICS and the MELTING POLAR ICE CAPS



KENNETH M. GOLDEN

Department of Mathematics, University of Utah

*followed by*

POSTER AND DESSERT RECEPTION

MCRN Junior Researchers display their work

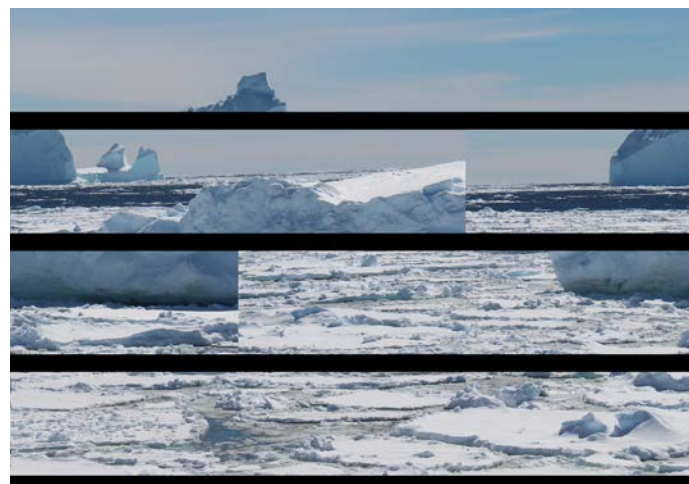
**Thursday, October 10, 2013**

**6:30 – 9:00 pm**

**Friday Center, University of North  
Carolina - Chapel Hill**

In September of 2012, the area of the Arctic Ocean covered by sea ice reached its lowest level ever recorded in more than three decades of satellite measurements. In fact, compared to the 1980's and 1990's, this represents a loss of more than half of the summer Arctic sea ice pack. While global climate models generally predict sea ice declines over the 21st century, the precipitous losses observed so far have significantly outpaced most projections.

Dr. Golden will discuss how mathematical models of composite materials and statistical physics are being used to study key sea ice properties and advance how sea ice is represented in climate models. This work is helping to improve projections of the fate of Earth's ice packs, and the response of polar ecosystems. In addition, an exciting video from a 2012 Antarctic expedition where sea ice properties were measured will be shown.



Sponsored by MCRN through a grant from the National Science Foundation and held in conjunction with the Renaissance Computing Institute and the Department of Mathematics at University of North Carolina – Chapel Hill



THE UNIVERSITY  
of NORTH CAROLINA  
at CHAPEL HILL

[www.mathclimate.org](http://www.mathclimate.org)