

The Rossby Centre Day is an annual outreach event where the activities of the Centre at SMHI are presented to collaborating researchers, climate stakeholders, as well as government and funding agencies. This year the Rossby Centre will host a 2-day workshop on:

Nordic-Arctic Climate Change: Towards an Earth System Approach

Workshop: October 13-14, 2008, Norrköping

The workshop will discuss the scientific underpinnings of Global and Regional Earth System Models (ESMs), along with a range of techniques for evaluating such models. Application of ESMs to the climate change problem will be highlighted, along with their use in climate impact, adaptation and mitigation work. Over the 2 days, presentations will be made both by invited international experts and scientists from SMHI.

The workshop will cover the following topics:

- The formulation of Global and Regional System Models
- Ocean and Sea-Ice Processes in ESMs
- Terrestrial and vegetation processes in ESMs
- Cloud and Aerosol Feedbacks in ESMs
- Observed and Simulated Climate Change in the Nordic and Arctic Regions
- Observation based evaluation of ESMs
- The use of ESMs in climate impact, adaptation and mitigation research
- Presentation and discussion of the latest Rossby Centre Regional Climate Scenarios for the Nordic and Arctic Regions

Background

Global and Regional Climate Models that have traditionally be used for making projections of future climate conditions, have generally only considered the physical components of the climate system. There is now an increasing recognition of the need to include a wider range of environmental processes within future climate models. This is both to better represent the range of feedbacks between the anthropogenic, physical, chemical and biological components of the climate system, as well as to directly simulate the response of key environmental systems to climate change. To this end a new generation of models are now under development, that include a more complete representation of interacting dynamical, physical, chemical and biological processes. Such models are referred to as Earth System Models.

The Rossby Centre is engaged in a range of collaborative projects developing Earth System Models for application to the Climate Change problem. A particular focus at the Centre is on Arctic and Nordic climate and the representation of important Earth System processes in these two regions.

This workshop is directed at the following general audience: (i) Scientists engaged in Earth System modelling; (ii) Scientists engaged in climate impact, adaptation and mitigation work; (iii) Decision makers and various stakeholders who require up-to-date information on projected climate change and wish to be informed on future directions in climate change research.

**To register for the workshop e-mail Rossby.Data@smhi.se
at latest by **October 1, 2008.****

The workshop is free of charge.

A detailed programme is available at:

http://www.smhi.se/content/1/c6/03/68/90/attatchments/rcday2008_agenda.pdf



Invited Lecturers include:

Dr Ghassem R. Asrar
Director, World Climate Research Programme,
Switzerland

Dr Jens H Christensen
Danish Meteorological Institute
Denmark

Professor Peter Cox
Met Office Chair in Climate System Dynamics
University of Exeter, United Kingdom

Professor Georgia Destouni
Department of Physical Geography &
Quaternary Geology, Stockholm University,
Sweden

Dr Helge Drange
Nansen Environmental and Remote
Sensing Centre, Norway

Dr. Johann Jungclaus
Max-Planck- Institute for Meteorology,
Germany

Professor Dr. Pavel Kabat
Chair and Science Director
Earth System Science & Climate Change
Group, University of Wageningen,
The Netherlands

Dr Vladimir Kattsov
Director, Main Geophysical Observatory
St Petersburg, Russia

Dr Andrew Roberts
International Arctic Research Centre
Alaska, USA

Dr George Tselioudis
NASA, Goddard Institute for Space Studies
New York, USA

ALONG WITH A RANGE OF LECTURES
FROM THE ROSSBY CENTRE AND SMHI