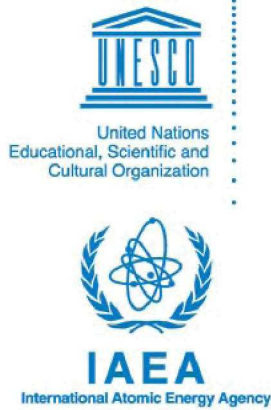




The Abdus Salam
International Centre for Theoretical Physics



*Fall Colloquium on the
Physics of Weather & Climate:
'Regional Weather Predictability
and Modelling'*
September 29 - October 10, 2008

The Abdus Salam International Centre for Theoretical Physics (ICTP) is organizing a *Fall Colloquium on the Physics of Weather & Climate: 'Regional Weather Predictability and Modelling'*, to be held from 29 September to 10 October, 2008, at ICTP, Trieste, Italy.

Regional or local atmospheric models are standard tools for the prediction of weather over a region or a local area. Yet, how much and what type of improvements over the driver global models can be achieved and for how long, remain questions with many unresolved issues. As a sequel to the ICTP 2002 and 2005 events, the purpose of the 2008 Colloquium is to facilitate the adoption and use of a current state-of-the-art limited area model by participants, take stock of the progress made since 2005, and address issues of active research aimed at advancing and better understanding the predictive skills of limited area models. This is to be achieved through the following combination of activities:

I. A *seven-day* Workshop on "*Design and Use of Regional Weather Prediction Models*".

This workshop will include tutorial lectures on the design of regional weather prediction models, emphasizing several features of active research, such as the representation of topography, the parameterization of convection and/or cloud microphysics, land-surface/ boundary layer modelling. The design of a specific model, the Eta model, widely used by the research and operational community, will be highlighted, and participants will receive a copy of a recently updated version of the Eta model. The workshop will include lab sessions in which students will be taught to install and run the Eta model, and will be encouraged to perform experiments relevant to a specific region or model feature.

II. A *three-day* Conference on "*Current Efforts Toward Advancing the Skill of Regional Weather Prediction. Challenges and Outlook*". The conference will include invited and contributed papers highlighting the following topics:

- Operational and data considerations: limited area systems, ensemble prediction, current directions;
- Basic numerical design: expectations and results from different model choices, including grid point Eulerian/semi-Lagrangian, conservation/finite-volume schemes, nested spectral, stretched grids and variable resolution approaches, etc.;
- Open questions on the numerical design: non-hydrostatic frameworks, how and when; choice of vertical co-ordinate/topography; approaches to the provision of lateral boundary conditions; resolution vs. domain size; convergence issues; benefits from "local" vs. regional models;
- Physical parameterizations: convection/ explicit cloud physics; boundary layer/subgrid-scale transports;
- Regional weather predictability: value added by limited area models and statistical downscaling; "upscaling", storm-scale prediction; verification issues.

Presentations by participants on their specific area of weather and climate research are welcome. If you wish to make a presentation (please specify type: *oral* or *poster*), upload a *one-page abstract* to the on-line application form.

PARTICIPATION

The workshop is intended for scientists and graduate students working in the areas of Atmospheric Physics and Dynamics, Climatology, Oceanography, Physics and Mathematics. It is open to scientists from all member countries of the United Nations, UNESCO and IAEA. The main purpose of the Abdus Salam ICTP is to help researchers from developing countries through a program based on international co-operation, and limited funds are available to support the attendance of such applicants, to be selected by the Organizers. Scientists from developed countries are also welcome to attend. The activity will be conducted in English. *Registration is free-of-charge.*

APPLICATION

The "On-line Application" form can be accessed at:

web form: <https://webform.ictp.it/LOGINS/login.mhtml?smr=1966>

or web page address: <http://www.ictp.it/~smr1966>

& ICTP agenda page: http://cdsagenda5.ictp.trieste.it/full_display.php?id=a07175

(Please save and upload file attachments in either: *RTF* format, *.doc* or *.PDF*)

Contact Information: Lisa Iannitti (smr1966)
c/o ICTP, Strada Costiera 11, 34014, Trieste, Italy
ph: +39-040-2240 227, fax: +39-040-2240 558, e-mail: iannitti@ictp.it

Directors

F. Mesinger (ESSIC, Univ. Maryland)
S. C. Chou (CPTEC/INPE, Brazil)

Local Organizer

F. Giorgi (ICTP, Italy)

Workshop Lecturers

- S. C. Chou (CPTEC/INPE, Brazil)
- M. Ek (NCEP/EMC, MD, USA)
- B. Grisogono (Univ. Zagreb, Croatia)
- F. Mesinger (ESSIC, U. Maryland)
- B. Rajković (Univ. Belgrade, Serbia)
- S. Tibaldi (ARPA-Bologna, Italy)
- S. Zilitinkevich (FMI, Finland)
- D. Županski (Colorado SU, USA)

Conference Speakers

- A. Arakawa (UCLA, USA)
- M. Baldauf (DWD-Offenbach, Germany)
- J. Egger (Univ. Munich, Germany)
- J. Garcia-Moya (INM, Madrid, Spain)
- G. Kallos (Univ. Athens, Greece)
- C. Keil (DLR-Oberpfafenhofen, Germany)
- C. Konor (Colorado SU, USA)
- S. Krichak (Tel Aviv Univ., Israel)
- L. Lazić (Univ. Belgrade, Serbia)
- S. Morelli (Univ. Modena, Italy)
- C. Perez (Barcelona Supercomp Ctr., Spain)
- M. Rančić (Univ. Belgrade, Serbia)
- G. Tripoli (Univ. Wisconsin-Madison, USA)
- S. Vannitsem (RMI, Belgium)

On-line Application Deadline

June 30, 2008