

# The Abdus Salam International Centre for Theoretical Physics







# International MedCLIVAR-ICTP-ENEA Summer School on the Mediterranean Climate System and Regional Climate Change

13 - 22 September 2010 Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), the European Science Foundation - Mediterranean Climate Variability and Predictability (ESF-MedCLIVAR) and the Agenzia nazionale per le nuove tecnologie, l'energia e lo sviluppo economico sostenibile (ENEA) will organize a co-sponsored International Summer School, which will be held at ICTP, Trieste, Italy from 13 - 22 September 2010.

## **Abstract**

The school will cover topics related to the observation, understanding and modeling of the Mediterranean climate system, its interactions with Earth's global climate, its natural variability and its response to anthropogenic and natural forcings.

#### Summary

The climate of the Mediterranean is influenced by complex interactions across different components of the climate system, such as the atmosphere, oceans, land and chemosphere. Interactions across these components occur locally within the Mediterranean basin and across the global climate system through atmospheric and oceanic teleconnections. Therefore, the simulation of Mediterranean climate, its natural variability and its response to anthropogenic and natural forcings, needs to span a wide range of spatial and temporal scales and a wide range of climate system interactions. Within this context, global climate models (GCMs) can simulate the effects of large and planetary scale processes, while regional climate models (RCMs) can account for the local effects of the complex topography, land use and coastline features that characterize the Mediterranean basin. In particular a new generation of coupled RCMs has been recently developed, capable of representing air-sea and land-atmosphere interactions as well as the effects of aerosols of natural and anthropogenic origin. These models can be used for a wide range of applications, from seasonal and decadal prediction to the projection of long term anthropogenic climate change. The school will cover the main processes that influence the climate of the Mediterranean, it will review available climate observations and climate modeling tools (both global and regional), and it will address the predictability of Mediterranean climate at scales from seasonal to centennial (along with related uncertainties). The school will include theoretical lectures, panel discussions and laboratory sessions with different observational and modeling datasets. Specific topics covered by the school include:

## Main Topics

- Mediterranean climate and Mediterranean sea circulation
- Observations, from paleo to historical periods
- Land-atmosphere-ocean interactions
- Chemistry-aerosol/climate interactions
- Global climate system models
- Regional climate system models for the Mediterranean (including oceans)
- Seasonal to decadal climate variability and predictability
- Climate change projections and related uncertainties

#### **Participation:**

The School is addressed to PhD-students, postdoctoral fellows and junior scientists. Students and scientists from all countries are welcomed to apply. The School will be conducted in English Limited funding for participants from developing and



# **Scientific Committee**

V. Artale (ENEA, Italy)

**P. Lionello** (University of Salento/CMCC, Italy)

**U. Ulbrich** (FU Berlin, Germany)

**F. Giorgi / E. Coppola** (ICTP, Italy)

Invited Speakers to be confirmed:

## **O. Boucher**

(LMD/IPSL/CNRS, France) I. Cacho (UB, Barcelona, Spain) A. Crise (OGS, Trieste, Italy) F. D'Andrea (2LMD-ENS, Paris, France) F. J. Doblas-Reyes (UB, Barcelona, Spain) S. Josey (University of Southampton, U.K.) M. Kanakidou (University of Crete, Greece) H. Le Treut (LMD/IPSL/CNRS, France) L. Li (LMD/IPSL/CNRS, France) J. P. Montavez (University of Murcia, Spain) P. Ruti (ENEA, Rome, Italy) S. Somot (CNRM/GAME, Météo-France/ CNRS, Toulouse, France) E. Xoplaki (University of Bern, Switzerland / The Cyprus Institute, Lefkosia, Cyprus) V. Zervakis (HCMR, Athens, Greece)

industrialized countries is available. There is no registration fee.

#### How to apply for Participation:

The on-line application form can be accessed via the ICTP activity agenda page at: <u>http://agenda.ictp.it/smr.php?2165</u> Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. Kindly send all file attachments in Word or PDF format. **Deadline for receipt of applications is 30 June 2010**.

#### **Contact Information:**

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#### ICTP Home page: http://www.ictp.it







# **APPLICATION DEADLINE**

# 30 June 2010