



## COLLEGE ON SOIL PHYSICS

### *Soil Physical Properties and Processes under Climate Change*

**30 August - 10 September 2010**

*(Miramare - Trieste, Italy)*

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, will organize a College on Soil Physics, to be held from 30 August to 10 September 2010.

The College aims to provide participants with a knowledge of soil physical properties and processes so that they may understand and solve engineering, agronomic and environmental problems and activities such as soil water flow, drainage, irrigation, land degradation, pollution, solute transport, and this in different climate regions.

The College also aims at contributing to the training of participants and to give them understanding of fundamental soil physical processes and to apply gained knowledge and skills to solving world problems in 'climate change', 'loss of biodiversity', and 'land degradation and desertification', referring to the '3 Rio Conventions' and the 'Millennium Goals'

Because of cooperation with the ICTP Climate Research Group, the College will focus in 2010 on: **Soil Physical properties and processes under climate change.**

Contributing and mitigating the effects of 'climate change', 'loss in biodiversity', and 'land degradation and desertification', need knowledge of the physical processes at the interface between land (soil and vegetation) and atmosphere (climate) especially in those areas of developing countries where the problems are the most.

During this two week College on Soil Physics, the following main topics will be covered:

- **Soil physical properties and processes**
- **Soil degradation and desertification processes**
- **Changes in mass and energy transport at different soil landscape scales**
- **Evidence from paleopedology to past climate**
- **Climate and soil-water-plant-atmosphere continuum**

An important aspect of the College is the interaction/discussion with the participants, and time will be made available for the participants to give presentations. Therefore the participants are encouraged to prepare a short summary of their work and research activities to be submitted together with their application form.

#### **PARTICIPATION**

The College is intended for students and professionals with varied background in physics, mathematics, soils, engineering, agricultural and environmental sciences. Scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the College. As it will be conducted in English, participants should have an adequate working knowledge of this language. Although the main purpose of the Centre is to help research workers from developing countries, through a programme of training activities within a framework of international cooperation, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants who are nationals of, and working in, a developing country, and who are not more than 45 years old. Such support is available only for those who attend the whole activity. There is no registration fee.

#### **HOW TO APPLY FOR PARTICIPATION**

The application form can be accessed at the activity website: <http://agenda.ictp.it/smr.php?2163>. Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form by **30 April 2010**.

#### **SECRETARIAT**

**Telefax: +39-040-224163**

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**ICTP Home Page: <http://www.ictp.it>**

#### **Directors**

##### **Donald Gabriels**

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##### **Donald Nielsen**

*Department of Land, Air and Water Resources, University of California, Davis (USA)*

##### **Ildefonso Pla Sentis**

*Departament de Medi Ambient i Ciències del Sol, Universitat de Lleida, Lleida, Spain*

##### **Edward Skidmore**

*U.S. Department of Agriculture, Manhattan, Kansas, USA*

#### **Local Organizer**

##### **GianCarlo Ghirardi**

*University of Trieste and ICTP, Trieste, Italy*

#### **DEADLINE**

For requesting participation

**30 April 2010**