



The Abdus Salam
**International Centre
for Theoretical Physics**

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5th Women in Mathematics Summer School on Mathematical Theories towards Environmental Models

27 May - 1 June 2013

Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) is organizing the **5th Women in Mathematics Summer School on Mathematical Theories towards Environmental Models**, which will be held at ICTP, Trieste, Italy, from **27 May to 1 June 2013**. The scientific committee is composed of Susanna Terracini, (University of Torino, Italy - chair), Lisbeth Fajstrup, (Aalborg University), Tamara Grava, (International School for Advanced Studies, Trieste, Italy) Stefanie Hittmeyer (University of Auckland, New Zealand), Emilia Mezzetti (University of Trieste, Italy), Marie-Françoise Ouedraogo (University of Ouagadougou, Burkina Faso), Marie-Françoise Roy (University of Rennes, France), Khanum Rashida Adeb (University of Essex, UK).

Our planet is the setting for dynamical systems of all sorts, including geophysical, atmospheric, biological and the human processes. It is an excellent example of a forced, dissipative non-equilibrium system dominated by highly nonlinear processes and featuring multi-scale interactions, so that its understanding can be approached using the tools of dynamical systems and partial differential equations theories. The school aims at approaching different core problems of pure and applied mathematics in a multidisciplinary perspective. It will consist of short courses focusing on four topics of the current research:

1. **Nonlinear Partial Differential Equations.** *Directors:* Giuseppina Autuori (Department of Mathematics and Informatics, University of Perugia) and Francesca Colasuonno (Department of Mathematics, University of Bari). *Speakers:* Michel Chipot (Department of Mathematics, University of Zurich), Ireneo Peral Alonso (Autonomous University of Madrid), Patrizia Pucci (Department of Mathematics and Informatics, University of Perugia), Vicențiu Rădulescu (Simion Stoilow Institute of the Romanian Academy, University of Craiova, Romania)

2. **Dynamical Systems and Bifurcation Theory with Applications to the Dynamics of Planet Earth.** *Directors:* Karin Mora (University of Bath) and Stefanie Hittmeyer (University of Auckland). *Speakers:* Ulrike Feudel* (University of Oldenburg), Hinke Osinga (University of Auckland), Kathrin Padberg-Gehle (TU Dresden), Lawrie Virgin (Duke University). (* to be confirmed)

3. **Isogeometric Analysis.** *Director:* Carlotta Giannelli (Johannes Kepler University, Linz). *Speakers:* Bert Jüttler (Johannes Kepler, University Linz), Carla Manni (Tor Vergata University, Rome, Italy), Giancarlo Sangalli (Mathematics Department, University of Pavia, Italy).

4. **Numerical Analysis of Environmental Flows.** *Director:* Chiara Simeoni (University of L'Aquila, Italy). *Speakers:* Manuel J. Castro Díaz (University of Malaga), Maria Lukacova-Medvidova (University of Mainz), Simona Perotto (MOX Politecnico di Milano), Vladimir Zeitlin (Ecole Normale Supérieure de Paris).

Each short course consists of an introductory part, a more advanced one, together with problem solving and tutorial sessions. The European Women in Mathematics summer schools aim at providing a stimulating intellectual environment for PhD students and post-docs from different countries and different mathematical disciplines. A major scope is to encourage the active participation of women into higher mathematics. Participants and lecturers will be of both sexes. This Summer School is part of the international initiative "Mathematics of Planet Earth 2013" supported by mathematical societies and institutes around the world.

Up to date information about the program of the school can be found at

<http://europeanwomeninmaths.org/activities/summer-school/women-in-mathematics-summer-school-ictp-2013>

PARTICIPATION

Mathematicians from all countries which are members of the United Nations, UNESCO or IAEA may attend the School. As it will be conducted in English, participants should have an adequate working knowledge of that 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 entire activity. Some financial aid will be available also for a limited number of participants from developed countries. 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?2468>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

Activity Secretariat:

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CO-SPONSORS

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University of Torino

Department of Mathematics
University of L'Aquila

SISSA, Trieste

SCIENTIFIC COMMITTEE

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LOCAL ORGANIZER

Lothar Göttsche (ICTP, Trieste)

MINI-COURSE DIRECTORS

Giuseppina Autuori (University of Perugia)
Francesca Colasuonno (University of Bari)
Karin Mora (University of Bath) &
Stefanie Hittmeyer (University of Auckland)
Carlotta Giannelli (Johannes Kepler University,
Linz)
Chiara Simeoni (University of L'Aquila)

DEADLINE

for requesting participation
extended to

28 February 2013

