

# The Abdus Salam International Centre for Theoretical Physics





## Advanced Workshop

### Spin and Charge Properties of Low Dimensional Systems

29 June - 4 July 2009

Sibiu, Romania

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, along with the Horia Hulubei National Institute of Physics and Nuclear Engineering (IFIN HH), Bucharest, Romania, will organize the above mentioned Workshop to be held at "Hotel Continental Forum", Sibiu, Romania, from 29 June to 4 July 2009.

#### **TOPICS**

- Spin-Electronic Phenomena in Low Dimensional Systems
- Quantum Dot Devices for Quantum Computation
- Novel Theoretical Approaches at the Nanoscale
- Electronic and Spin Transport in Quantum Wells and Quantum Dots

The Advanced Workshop will consist of 3-4 daily lectures given by leading experimental and theoretical researchers in the field of Spintronics and Quantum Computation. Participants will be able to present their own work in a Poster Session during the Workshop.

The main objective of this Workshop is to bring together experimental and theoretical researchers in the field of Spintronics and Quantum Computation. This will be of great benefit to scientists from developing countries, as they will have the possibility to interact with some of the most prominent physicists in this field. Also, through the Poster Session scientists from developing countries will have the possibility to present their current work and possibly initiate collaborations with their colleagues from developed countries.

#### **PARTICIPATION**

Scientists and students from all countries, which are members of the United Nations, UNESCO or IAEA, may attend the Workshop. 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 program 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. Such support is available only for those who attend the entire activity. There is no registration fee for attending the Workshop.

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

The on-line application form can be accessed via the ICTP activity agenda page at: <a href="http://agenda.ictp.it/smr.php?2076">http://agenda.ictp.it/smr.php?2076</a>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form. **Deadline for receipt of applications is 31 March 2009**.

#### **CONTACT INFORMATION AND SECRETARIAT**

ICTP: E-mail: <a href="mailto:smr2076@ictp.it">smr2076@ictp.it</a>
ICTP Home Page: <a href="http://www.ictp.it">http://www.ictp.it</a>

IFIN-HH: E-mail: dragos@theory.nipne.ro

IFIN-HH Web Page: <a href="http://www.theory.nipne.ro/AWLDS2008/index.html">http://www.theory.nipne.ro/AWLDS2008/index.html</a>

#### **DIRECTORS**

**IFIN-HH** 

Michael E. Flatté

(University of Iowa, Iowa City, USA)

**Marco Polini** 

(NEST-CNR-INFM and Scuola Normale Superiore, Pisa, Italy)

**Ionel Tifrea** 

(California State University, Fullerton, USA)

Giovanni Vignale

(University of Missouri, Columbia, USA)

#### LOCAL ORGANIZERS

Mikhail Kiselev (ICTP, Trieste, Italy) Victor Barsan (IFIN-HH, Bucharest, Romania)

**Dragos-Victor Anghel** (IFIN-HH, Bucharest, Romania)

#### **LECTURERS**

**David Awschalom** (University of California, Santa Barbara, USA)

**Alexander Efros** (Naval Research Laboratory, Washington D.C., USA)

**Rosario Fazio** (Scuola Normale Superiore, Pisa, Italy)

**Jonathan Finley** (Technical University Munich, Munich, Germany) to be confirmed

Gabriele Giuliani (Purdue University, West Lafayette, USA)

**Tomas Jungwirth** (Academy of Sciences, Prague, Czech Republic and University of Nottingham, Nottingham, U.K.)

**Paul Koenraad** (University of Technology, Eindhoven, The Netherlands)

**Daniel Loss** (University of Basel, Basel, Switzerland)

**Martino Poggio** (University of Basel, Basel, Switzerland)

**Bart van Wees** (University of Groningen, Groningen, The Netherlands)

**DEADLINE** for receipt of applications

31 March 2009