



# Institute of Theoretical and Applied Physics

## ITAP

## 2012 Program

Turunç, Marmaris, Turkey <http://itap-tthv.org>

International Advanced Research School (IARS)

IARS schools are designed to disseminate the latest advances in the topics of high interest to qualified national/international graduate students, young academic researchers and not the least, highly motivated senior undergraduate students. Activities take place in a highly interactive environment. In addition to in-class lectures including chalk and board, most programs are designed in a way to expose the participants to concrete hands-on training in supervised problem solving sessions closely related to current research problems of the topic studied. In most cases we allow and encourage young strong participants to present their research results in short afternoon seminars. Those participants with accepted short presentations will also be considered for financial support partially covering the local expenses during their stay. National students' local expenses are covered by state projects. IARS cannot support the travel expenses of national/international participants. **For more information about the contents of the IARS schools, location, participation fees etc. visit the ITAP web page above.**

There are six international summer school/workshop activities in 2012 which are detailed below. **Beware of different deadlines for different activities.** Online applications can be submitted at: <http://itap-tthv.org/Applications.html>



### International Henry Moseley School and Workshop on X-ray Science

*June 14-23 (application deadline: May 18, 2012)*

This 10 day international school aims at training young academical/industrial researchers and students at research level in the interdisciplinary fields of principles and advances of x-ray scattering/diffraction, protein and molecular crystallography, x-ray absorption and fluorescence spectroscopy, x-ray imaging and tomography, nuclear resonance scattering, x-ray photoelectron spectroscopy, ultra fast applications in the nano and femto regimes. The target audience range from physics, chemistry, structural and functional biology, bio-organic chemistry, geology, mineral physics, material science, earth and environmental sciences, botanics and medical sciences.

### International Summer School and Workshop on Brain Dynamics

*July 23 - 28 (application deadline: June 22, 2012)*

International Workshop on Brain dynamics aims at highlighting the state of the art topics in the study of functional and behavioral dynamics as well as complexities of the brain by bringing together experts from a variety of interdisciplinary fields involving neuroscience, neurotechnology, engineering, medicine, computer science, mathematics and physics. The workshop targets at senior and junior researchers, scientists, engineers, clinicians, mathematicians, physicists, biologists and students, to inform them about the recent advances in brain dynamics research.

### Eurasia-Pacific Summer School & Workshop on Strongly Correlated Electrons: A Joint Organization of ITAP, APCTP (South Korea) & Academia Sinica (Taiwan)

*August 6-17 (application deadline: July 6, 2012)*

This summer school and the follow-up workshop are jointly organized by ITAP, Asia Pacific Center for Theoretical Physics (APCTP, South Korea) and Institute of Physics of the Academia Sinica (Taiwan) and planned to be the continuation of the 2011 Eurasia-Pacific meeting. The main themes are Superconductivity (cuprates, iron-based compounds, heavy fermions), Topological insulators and quantum spin Hall effects, Graphene & carbon nanotubes, Fractional quantum Hall; bilayers; two-dimensional electron liquids at oxide interfaces, Magnetic manganites & cobaltites, etc. The seven-day school part, is designed for training young researchers on the advances in these fields and is followed up by a four day international workshop. This summer school/workshop is planned to internationally rotate within the supporting organizations starting from 2013.

### International Workshop on Statistical Mechanics and Dynamical Systems

*August 27-September 3 (application deadline: July 27, 2012)*

This event is a natural extension of the Greek-Turkish meetings on Statistical Mechanics and Dynamical Systems, that have been organized in 2008 and 2010. This international event is open for the participation of scientists as well as research students from around the world and working in statistical mechanics and dynamical systems. Scientists from the Eurasia-Mediterranean region are particularly encouraged to attend.

### 2012 Cambridge - ITAP School and Workshop on Coherence and Condensation in Low Dimensional Systems

*September 9-16 (application deadline: August 10, 2012)*

This international school and workshop on coherence and condensation in low dimensional systems aims at training young researchers in the recent advances in atomic and excitonic Bose-Einstein condensed systems and their optical properties. This third school is in the scope of the series of two other schools organized at ITAP in the past on similar topics.

### International Advanced Summer School on Fluid Mechanics and Magnetohydrodynamics

*September 18-29 (application deadline: August 17, 2012)*

This international school targets at basic research training in Fluid Mechanics and Magnetohydrodynamics for advanced graduate students and PhD students interested in Astrophysics, Plasma Physics as well as Applied Mathematics. The aim is to provide a coherent and rigorous introduction in these fields, including Continuum Thermodynamics, Topological Magnetohydrodynamics and Relativistic Fluid Mechanics.

**Besides these academic activities, ITAP organizes a large number of science festivals in 2012 targeting families with children. For more information visit the ITAP Center for Science and Society web site at <http://itap-btm.org> or contact the address on the right.**



For further enquiries for scientific, lodging, participation fee, venue etc. issues contact:

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