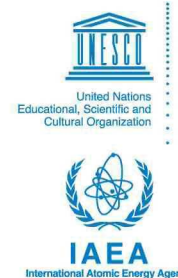




The Abdus Salam  
International Centre for Theoretical Physics



# ICTP-ITU/BDT School on Sustainable Wireless ICT Solutions for Environmental Monitoring Followed by International Awareness Conference on Sustainable Wireless Solutions for Environmental Monitoring

6 - 24 February 2012  
Miramare, Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, in collaboration with the International Telecommunication Union (ITU) is organizing a School on "Sustainable Wireless ICT Solutions for Environmental Monitoring" (6–22 February 2012), followed by an International Awareness Conference on "Sustainable Wireless Solutions for Environmental Monitoring" (23–24 February 2012).

## **PURPOSE AND NATURE**

Environmental monitoring could enable important advances in science, agriculture, forestry and disaster mitigation. However, only limited research is currently carried out in many Developing Countries using modern technologies. The School will expose participants to new wireless technologies, amenable also for Developing Regions. These technologies can work with low power and are not dependent on any existing electrical network. These are low-cost sustainable solutions. Once the environmental data are collected in remote areas (volcanoes, mountains, lakes, etc), they have to be transmitted to a central database for processing and further analysis. The cost of providing the wiring infrastructure to support such transmissions is simply out of the question. In the last couple of years we have witnessed an incredible evolution of wireless technologies that can provide a viable solution. In this School, we will present the use of various low-cost and sustainable wireless technologies. We believe that a mix of these technologies is the best solution not only to build environmental sensor networks but also to allow scientists to communicate. Training at the level of Academic and Research institutions on the subject of the School is essential to develop sustainable human capacity in those countries.

## **AWARENESS CONFERENCE**

In this Conference, workshop participants and Telecom Administrations, Regulators, Operators, and international experts will report and discuss the most advanced wireless solutions for environmental monitoring. The results of the technical discussion and the definitions about educational, economic and regulatory aspects should be presented to and discussed with policy makers from LDC government, higher education institutions and donor organizations.

## **PARTICIPATION**

Scientists and students from all countries that are members of the United Nations, UNESCO or IAEA may attend the activity. As it will be conducted in English, participants must have an adequate working knowledge of this language. Although the main purpose of the Centre is to help researchers 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. Preference will be given to candidates that did not attend similar activities previously organized by ICTP.

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

## **HOW TO APPLY FOR PARTICIPATION**

The application form can be accessed at the activity website <http://agenda.ictp.it/smr.php?2329>. Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

ACTIVITY SECRETARIAT: Telephone: +39-040-2240-226  
Telefax: +39-040-2240-7226

E-mail: [smr2329@ictp.it](mailto:smr2329@ictp.it)  
ICTP Home Page: <http://www.ictp.it/>

September 2011



MAIN CO-SPONSOR:



## **DIRECTORS**

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**Ryszard Struzak**, National Research Institute for Telecommunications of Poland, former Vice-Chairman of the Radio Regulation Board of International Telecommunication Union (ITU)

## **INTERNATIONAL EXPERTS WILL ADDRESS THE FOLLOWING TOPICS:**

Radio physics  
Basics of Wireless Networking  
Spectrum management and regulatory issues  
Wireless standards and protocols  
Wireless infrastructure and topologies  
Radio link power budget  
Mesh Networking  
Wireless sensor networks and their applications  
Powering issues in wireless networks  
Wireless networks for environmental monitoring

**DEADLINE FOR RECEIPT OF  
APPLICATIONS:**  
15 November 2011

**DEADLINE ONLY FOR  
ITU/BDT FELLOWSHIP  
APPLICATIONS**  
9 December 2011