



The Abdus Salam International Centre for Theoretical Physics


United Nations
Educational, Scientific
and Cultural Organization


International Atomic
Energy Agency



ICTP-ITU-URSI SCHOOL ON WIRELESS NETWORKING FOR DEVELOPMENT **6 - 24 February 2006** **Miramare - Trieste, Italy**

The Abdus Salam International Centre for Theoretical Physics (ICTP) will organize an "ICTP-ITU-URSI School on Wireless Networking for Development", to be held from 6 to 24 February 2006 in Trieste, Italy.

Cooperating institutions are:

- ITU Telecommunication Development Bureau
 - URSI International Union of Radio Science
 - EsLaRed (ULA, Venezuela)
- and other organizations.

DIRECTORS

Prof. Sandro M. Radicella (Head, Aeronomy and Radiopropagation Laboratory - ICTP)

Prof. Ryszard Struzak (Former Vice-Chairman of the Radio Regulation Board, Member of the URSI Commission on Developing Countries)

PURPOSE AND NATURE

The School is addressed to a limited number of candidates coming from academic and research institutions of Developing Countries and having an adequate working knowledge of IP networking.

It will include tutorial lectures and laboratory work, where wireless solutions for computer networking will be experienced through the simulation of a campus-wide implementation of a wireless network.

The Laboratory work will be dedicated to technical planning and implementation of campus-wide wireless networks, with practical exercises and demonstrations of:

- radio link planning, building and measurement of antennas for WiFi
- WiFi equipment installation, configuration and cabling;
- security and authentication systems for wireless networks;
- setup of long and medium distance wireless links, remote site powering;
- voice over IP;

During the School the participants will be invited to present case studies on their scientific activities related this School's topics.

In collaboration with experts from the industry, the latest wireless technologies will be made available for testing.

This School is organized following the experience and feedback of previous schools on the use of radio for digital communications held yearly since 1998 and according to the evolution of wireless technologies.

PARTICIPATION

Scientists and students, not more than 45 years of age, from all countries that are members of the United Nations, UNESCO or IAEA may attend the School. Although the main purpose of the ICTP is to help researchers from developing nations through a programme of training activities within a framework of international cooperation, students and postdoctoral scientists from developed countries are also welcome to attend. As the School will be conducted in English, participants must have a good working knowledge of that language.

The 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 the home institution. However, limited funds are available for some participants(*) from, and working in, developing countries, to be selected by the organizers. Such financial support is available only for those who attend the entire activity. Every effort should be made by candidates to secure support for their fare (or at least half fare) from their home country. There is no registration fee to attend the School.

The **Application Form & Brief Technical Questionnaire** obtainable also from the ICTP WWW server:
http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a05192 (under: **application_form**)

should be completed and returned **before 16 September 2005** to:

ICTP-ITU-URSI School on Wireless Networking for Development
(c/o Ms. S. Tanaskovic - smr1740)

the Abdus Salam International Centre for Theoretical Physics
Strada Costiera 11, 34014 Trieste, Italy.

or

<mailto:smr1740@ictp.it> (please save and send file attachments in RTF format)

SCHOOL SECRETARIAT

Telephone: +39-040-2249911

Telefax: +39-040-224600

E-mail: smr1740@ictp.it School home page: <http://wireless.ictp.it> ICTP Home Page: <http://www.ictp.it/>

Trieste, July 2005

MAIN TOPICS:

- ◆ WIRELESS NETWORK ARCHITECTURE
- ◆ DIGITAL MODULATIONS & CODING
- ◆ 802.11 COMMUNICATION PROTOCOLS FAMILY FOR WiFi
- ◆ 802.16 COMMUNICATION PROTOCOLS FAMILY FOR WiMax
- ◆ SECURITY OF WIRELESS NETWORKS
- ◆ ANTENNAS: THEORY, BUILDING, INSTALLATION & MEASUREMENTS
- ◆ RADIOPROPAGATION, SPECTRUM MANAGEMENT & REGULATORY ISSUES
- ◆ NETWORK PLANNING, DESIGN & IMPLEMENTATION OF RADIO LINKS
- ◆ REMOTE SITES POWERING ISSUES
- ◆ POWER LINE COMMUNICATIONS
- ◆ VOICE OVER IP
- ◆ OPEN SOURCE SOFTWARE
- ◆ ECONOMIC & FINANCIAL ASPECTS OF WIRELESS NETWORKS
- ◆ FRONTIERS OF RADIOCOMMUNICATION TECHNOLOGY

LOCAL ORGANIZER:

S.M. RADICELLA (ICTP)

DEADLINE FOR REQUESTING PARTICIPATION:

16 September 2005

SCHOOL HOME PAGE:

<http://wireless.ictp.it>