

# SCHOOL ON DIGITAL RADIO COMMUNICATIONS FOR RESEARCH AND TRAINING IN DEVELOPING COUNTRIES

9 - 27 February 2004

Miramare - Trieste, Italy

URSI - ITU - ICTP

The Abdus Salam International Centre for Theoretical Physics (ICTP) will organize a "School on Digital Radio Communications for Research and training in Developing Countries", to take place from 9 to 27 February 2004. This Bulletin contains preliminary information and the Request for Participation form.

## DIRECTORS

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

Prof. Struzak (Former Vice-Chairman of the Radio Regulation Board - ITU - Geneva, Switzerland)

## PURPOSE AND NATURE

This School is the follow-up of the previous schools on the use of radio for digital communications held yearly since 1998 and series of Colleges on Radiopropagation carried out earlier at ICTP with the collaboration of URSI and ITU/BDT.

The School will cover radio-based computer networking in academic and research environment focusing on specific issues of Developing Countries. It will include tutorial lectures and laboratory work, where both computer networking and radio techniques for digital communications will be experienced.

## MAIN TOPICS

The programme will consist of:

1. Tutorial lectures and practical exercises given by international experts on the following topics:
  - The role of radio in modern Information and Communication Technology for Education and Research in Developing Countries.
  - Digital techniques for data radio links, including Spread Spectrum.
  - 802.11 communication protocols family for wireless local networks (WLANs)
  - Radiopropagation, antennas and radio regulatory issues.
  - Design of radio links using Digital Terrain Models.
  - Economic and financial aspects of planning and implementation of WLANs for education and research.
  - Frontiers on use of radio in Information and Communication Technology applications.
2. The Laboratory work will include practical exercises on:
  - Radio measurements for voice and data communication.
  - Building, installation and testing of antennas and radio links indoor and outdoor.
  - WiFi equipment installation, planning and testing of WLANs, including mobile systems.
  - Point-to-point short and middle-distance radio links for Internet, focusing on campus-wide and intra-campus radio networks.
3. Discussions and analyses of selected case studies to be presented by the participants on issues related to the programme of the School. Technical experts from telecommunication sector will be invited to participate in this part of the School.

## 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.

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. Those wishing to participate should complete and return the "Request for Participation" form, to be found at the back of Bulletin No. 1 (also obtainable via e-mail: [smr1554@ictp.trieste.it](mailto:smr1554@ictp.trieste.it), using as subject "get announcement", or via WWW Server: <http://www.ictp.trieste.it/>) to:

the Abdus Salam International Centre for Theoretical Physics

### "School on Digital Radio Communications"

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**Deadline for receipt of applications: 1st October 2003**

The decision of the Organizers will be communicated to all candidates as soon as possible thereafter.

July 2003

## Directors

Sandro M. Radicella, *ICTP, Italy*

R.Struzak, *ITU, Switzerland*

## Local Organizer

Sandro M. Radicella, *ICTP, Italy*

## School Secretariat

Mabilo Koutou, *ICTP, Italy*

[smr1554@ictp.trieste.it](mailto:smr1554@ictp.trieste.it)

**Deadline for applications**  
**1st October 2003**

