

national atomic energy agency the **abdus salam** international centre for theoretical physics

SCHOOL ON RADIO USE FOR DIGITAL AND MULTIMEDIA COMMUNICATIONS

11 February - 1 March 2002

Miramare - Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP - Trieste, Italy), in cooperation with the International Union of Radio Science (U.R.S.I. - Gent, Belgium) will organize a "School on Radio Use for Digital and Multimedia Communications", to take place from 11 February to 1 March 2002. This Bulletin contains preliminary information and the Request for Participation form.

DIRECTORS

Prof. S.M. Radicella (Head of Aeronomy and Radiopropagation Laboratory - ICTP) Prof. R. Struzak (Member of the Radio Regulation Board - ITU - Geneva, Switzerland).

LOCAL ORGANIZER

Prof. S.M. Radicella (ICTP)

PURPOSE AND NATURE

This School is the follow-up of the previous schools on the use of radio for digital communications held in 1998, 1999, 2000 and 2001. These schools had on their turn replaced the past series of Colleges on Radiopropagation carried out at ICTP with the collaboration of URSI and ITU/BDT.

Because of the growing importance of computer networking the School will cover also topics related to this subject.

The School will include tutorial lectures and laboratory work, where both computer networking and radio techniques for digital communications will be demonstrated. It will be complemented by selected case studies to be presented by the participants. Such a scheme proposed for the School is the result of experience gained during previous activities.

MAIN TOPICS

The programme will consist of:

- 1. Tutorial lectures given by international experts on the following topics:
 - Perspectives on the impact of Information Technology and Telecommunications on emerging and developing economies.
 - The role of radio in modern Information Technology and Telecommunications including mobile communications.
 - Radiopropagation issues for modern radiocommunications.
 - Digital radiocommunications including: FDMA, TDMA and CDMA (spreadspectrum) radio links.

2. The Laboratory work:

The Laboratory work will simulate the planning and implementation of a local area computer network (campus size) with simple multimedia facilities radio links. It will include the use of mobile systems.

The work will include practical exercises on:

- Radio technologies use for digital communications,
- Computer networking using radio links including mobile systems,
- Intranet multimedia campus 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 enterprises will be invited to participate in this part of the School.

The scheme proposed for the School is the result of experience gained during previous activities.

PARTICIPATION

Scientists and students 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 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. For logistics reasons, connected with the number of Personal Computers available, the total number of participants in the School is limited. There is no registration fee to attend the School.

Deadline for receipt of applications: 15 November 2001

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

Those wishing to participate should complete, sign and return the "Request for Participation" form, to be found at the back of this Bulletin (also obtainable via e-mail: **smr1396@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 Radio Use for Digital and Multimedia Communications (c/o Mr. Adriano Maggi) Strada Costiera 11 I-34014 Trieste, Italy

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(If sending an application via e-mail, please save the form in RTF format and send it as attachment.)