

URSI-ICTP School on Radio Physics

27 - 31 March 2017

Miramare – Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy, will organize in collaboration with the International Union of Radio Science (URSI), the URSI-ICTP School on Radio Physics from **27 - 31 March 2017**. The School will also be co-sponsored by Boston College of the United States of America and the United Nations Office of Outer Space Affairs.

TOPICS AND FACULTY

With increased societal dependence on space and ground based radio systems for communications, navigation and remote sensing it is increasingly important to train the next generation of scientists in the theory and applications of radio wave propagation. This school will provide radio physics training to young scientists and graduate students from around the world, but with a particular focus on developing countries. As well as lectures, the School will include hands-on laboratory sessions in remote sensing and radio wave propagation.

The topics to be covered in this school are those relevant to the interests of Commissions F, G and H of URSI. These commissions respectively address the topics of wave propagation and remote sensing, ionospheric radio and propagation, and waves in plasmas.

Lectures will include:

- the theory of terrestrial radio propagation through non-ionized media;
- the theory of space-earth propagation through ionized media;
- space physics – an introduction to the ionosphere and plasmasphere in the context of communications, navigation and remote sensing;
- space weather and its effects on radio systems;
- electromagnetic modeling for the simulation of scattering and microwave emission from natural surfaces
- retrieval of atmospheric and land surface parameters from remote sensing data;
- environmental applications of remote sensing techniques
- current and future radio systems.

The latter will include HF and SATCOM communication for terrestrial and aviation applications, Global Navigation Satellite Systems, remote sensing, emergency location systems, natural resource monitoring and many other applications that may have societal benefit, particularly for the developing world.

As well as networking with other like minded graduate students and young scientists the School will introduce attendees to URSI, an organization that stimulates and coordinates studies in the fields of radio, telecommunication, and electronic sciences through scientific and technical symposia and publications.

The school will include five full days of lecture and laboratories.

Lecturers will include:

- Patricia Doherty, Boston College, USA
- Iwona Stanislawska Polish Academy of Sciences, Poland
- Sandro M. Radicella, ICTP
- Simonetta Paloscia, IFAC-CNR, Italy
- Craig Kletzing, University of Iowa, USA
- Paul Cannon, University of Birmingham, United Kingdom
- John Mathews, Penn State University, USA
- Bruno Nava, ICTP
- Anthea Coster, MIT Haystack Observatory, USA

GRANTS

A limited number of grants are available to support the travel and living expenses of selected participants, with priority given to participants working in a developing country and who are at the early stages of their career.

HOW TO PARTICIPATE

The online application form can be accessed at the website:

<http://indico.ictp.it/event/7956/>

DIRECTORS

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LOCAL ORGANIZER

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DEADLINE

For requesting participation:

15 January 2017

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