

Joint ICTP-IAEA School on Atomic Processes in Plasmas

27 February – 3 March 2017

(ICTP, Miramare - Trieste, Italy)

The Abdus Salam International Centre for Theoretical Physics (ICTP) and the International Atomic Energy Agency (IAEA) will jointly organize this School to be held at ICTP in Miramare, Trieste, Italy, from 27 February to 3 March 2017. The event will provide advanced training in theoretical and computational methods for atomic processes in plasmas. The schedule will feature lectures by international experts, exposure to modern scientific computer codes, posters and discussion sessions, with good time available for personal interaction. We expect participants from around the world.

PURPOSE

The conditions in laboratory and industrial plasmas, laser-produced plasmas, astrophysical plasmas, and warm and hot dense matter are determined by numerous atomic processes including electron-ion and heavy particle collisions, photon-induced processes, and radiation emission and transport. Even in fully ionized plasmas, which are typical for fusion energy research, atomic processes are very important as they underlie all impurity-based spectroscopic diagnostics.

The school will assist qualified Ph.D. students and early career researchers to develop their quantitative understanding of collisional and radiative atomic processes in plasmas with applications to fusion energy research, astrophysical science, laser-produced plasmas and other plasma environments. Participants will become acquainted with their international peers and will have a unique opportunity to establish links for their mutual support. Knowledge transfer will be facilitated between individuals from developed and developing countries.

TOPICS

- ✦ Principles of spectroscopic diagnostics of plasma;
- ✦ Collisional-radiative modelling and calculation of plasma spectra;
- ✦ Computational methods for atomic structure and collisions;
- ✦ Simulations of non-Maxwellian and highly transient plasmas;
- ✦ Radiation transport effects on plasma properties and plasma diagnostics;
- ✦ Methods for analysis of spectral line shapes and profiles;
- ✦ Online codes for calculation of ionization distributions and spectra.

The School will consist of lectures, computer labs and participant presentations. For the most up-to-date information please see the meeting web page at IAEA:
<https://www-amdis.iaea.org/Workshops/ICTP2017/>

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.

There is no registration fee for attending the school.

HOW TO APPLY FOR PARTICIPATION

The Online Application can be accessed at: <http://indico.ictp.it/event/7950/>
Comprehensive instructions will guide you step-by-step on how to fill out and submit the application form. After your profile information is complete and before submitting the application you will be asked to attach a one-page abstract of a scientific contribution to the poster session of the school. Kindly send all file attachments in Word or PDF format.

DIRECTORS

H.-K. Chung and B. J. Braams
(IAEA, Austria)

Yu. Ralchenko
(NIST, USA)

LOCAL ORGANIZER

J. Niemela
(ICTP, Trieste)

SCHOOL LECTURERS

C. Ballance
(Queen's Univ., Belfast, UK)

H.-K. Chung
(IAEA, Austria)

S. Fritzsche
(Helmholtz-Institut, Jena, Germany)

H.-J. Kunze
(Ruhr Univ., Germany)

Yu. Ralchenko
(NIST, USA)

H. A. Scott
(LLNL, USA)

J. Seely
(Artep Inc, USA)

E. Stambulchik
(Weizmann Inst. Sci., Israel)

DEADLINE

to request participation

20 October 2016

Secretariat: Ms. Rosa del Rio (smr 3105)
Telephone: +39-040-2240396 - Telefax: +39-040-22407396 - E-mail: smr3105@ictp.it
ICTP Home Page: <http://www.ictp.it>