The Abdus Salam International Centre for Theoretical Physics

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United Nations Educational, Scientific and Cultural Organization

IAEA International Atomic Energy Agency

Joint ICTP-IAEA Advanced School and Workshop on Modern Methods in Plasma Spectroscopy

16 - 27 March 2015

ICTP, Miramare – Trieste, Italy

The Abdus Salam International Centre for Theoretical Physics (ICTP) and the International Atomic Energy Agency (IAEA) will jointly organize this Advanced School and Workshop to be held at ICTP in Trieste, Italy, from 16 to 27 March 2015. The ***Advanced School in the first week*** will bring together experts in experimental and theoretical plasma spectroscopy to train early-career plasma scientists in the most recent developments and results in the field, and the ***Workshop in the second week*** will provide opportunities for participants to present their results and discuss current needs in plasma diagnostics techniques and motivate further developments.

PURPOSE:

The purpose of the School and Workshop is to provide training and information exchange for plasma physicists, plasma spectroscopists, and other users of atomic and molecular data for fusion, astrophysics and plasma applications to expand their knowledge of plasma spectroscopy and associated atomic and molecular sciences. With rapid development of experimental and theoretical techniques for plasma spectroscopic diagnostics as well as ongoing construction and/or upgrade of international (ITER) and national fusion machines and new space observatories, a comprehensive yet reasonably compact overview of modern diagnostic methods will significantly contribute to improvement of analysis and understanding of plasma behaviour in fusion reactors, industrial devices, and extraterrestrial objects.

TOPICS:

- Advances in experimental plasma diagnostic techniques
- Methods for calculation of atomic structure and collision characteristics
- Population kinetics and calculation of plasma spectra including collisional-radiative modeling
- Analysis of spectral line shapes and profiles
- Spectroscopic characteristics of non-Maxwellian and highly transient plasmas
- Effects of non-local radiation transport
- Current needs in plasma diagnostics techniques (laboratory and astrophysical plasmas)
- Computer code training (FLYCHK, CRETIN, GRASP, Cowan's codes)

The Advanced School will consist of a series of lectures and computer labs and the Workshop will consist of invited and contributed presentations and poster sessions.

PARTICIPATION: *Scientists from all countries that are members of the UN, UNESCO or IAEA can attend the event. Participants should be active researchers in the field of plasma spectroscopy and it is expected that all participants will present a poster or a talk on their work related to the conference topic. A one-page abstract of such a contribution is requested as a part of the application procedure. It is encouraged for participants to attend the two-week event, however, it is possible to attend one week only. Due to organizational reasons, the total number of participants is limited to 60.*

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Limited funds are available for some applicants from developing countries, to be selected by the organizers. Every effort should be made by candidates to secure support for their fares (or at least half-fare) from their home country. ***There is no registration fee for attending the school or the workshop****.*

HOW TO APPLY:

The online application form for this School is available at:
http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a14254**.** Once in the website, comprehensive instructions will guide you step-by-step on how to fill out and submit online the application form. Please apply not later than **2 November 2014**. Under "other information" applicants should attach a one-page abstract (PDF, DOC, DOCX, RTF or TXT) of their scientific contribution to the advanced school and conference. The organizers will assign the format (talk or poster), but please indicate a preference if applicable.

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In cooperation with IAEA
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DEADLINE

2 November 2014

ICTP Home page: http://www.ictp.it/
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