Joint ICTP-IAEA Workshop on the Physics and Technology of Innovative High Temperature Nuclear Energy Systems

14 – 18 October 2019
Trieste, Italy

Further information:
http://indico.ictp.it/event/8725/
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The workshop covers several aspects related to High Temperature Reactors with focus on the state-of-the-art in technology, design concepts, cogeneration and nuclear heat applications. It includes scientific aspects such as reactor physics, thermal-fluids, analyses and simulation.

Directors:

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Description:

Many countries are exploring nuclear power as a part of their future energy mix. Advanced High Temperature Reactors have the potential to cover not only electricity production but also the rest of the energy market where high temperature steam and/or process heat is required for industrial chemical processes.

This workshop provides extensive and up-to-date information on the design and safety principles of these reactors.

It also presents the latest on research and development of methods, processes and technologies related to process heat applications, including hydrogen production using nuclear energy.

The workshop also highlights the safety of the overall integration and coupling between the two plants.

Interactive discussions and activities during the workshop aim to stimulate innovative thinking and create the knowledge base and networking between young scientists and experienced professionals in the field.

Topics:

- Global scenarios for nuclear energy;
- Advances of SMRs and overview and status of HTR technologies;
- Non- electrical applications of nuclear energy;
- Safety characteristics and design philosophy;
- Core neutronics and thermal-fluid design features;
- Status of fuel development for HTRs for normal and accident conditions;
- Innovative primary components and availability of high temperature materials (graphite, structural materials, coolants, molten salt, and for hydrogen production facilities);
- Source terms evaluation, chemical form and transport phenomena;
- Uncertainties in analysis including uncertainties in cross section libraries;
- Use of software tools for Simulation, HTR analysis and Process Heat Applications.

Local Organizer:

NICOLA SERIANI, ICTP, Italy

Applicants are advised to submit a brief abstract on relevant topics. A limited number of contributed abstracts will be selected for a poster session.

How to apply:

Online application:
http://indico.ictp.it/event/8725/

Female scientists are encouraged to apply.

Grants:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Deadlines:

For applications needing financial support and/or visa:

28 July 2019

For applications not needing financial support and/or visa:

15 September 2019

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