



Second Joint ICTP-IAEA Workshop on Open-Source Nuclear Codes for Reactor Analysis

Description:

The open-source community is experiencing significant growth and has become a valuable resource, especially for countries with limited access to advanced computer and IT systems. The IAEA's initiative, Open-Source Nuclear Codes for Reactor Analysis (ONCORE), addresses the identified challenges by promoting the development and application of open-source multi-physics simulation tools. These tools are specifically crafted to facilitate research, education, and training for the analysis of advanced nuclear power reactors.

MORE DETAILS:

Participation in the workshop is highly beneficial for institutions and individual users in developing countries, providing them access to knowledge and tools that might otherwise be challenging to obtain. The event serves as a platform for collaboration with recognized experts in the field, facilitating valuable connections and knowledge exchange. Moreover, the workshop promotes collaboration and the sharing of resources, materials, and tools, enhancing research and education.

This advanced workshop offers a comprehensive exploration of modern computational methods employed in nuclear reactor analysis. The agenda is designed to lead participants through the key steps required to conduct engineering-scale multi-physics simulations.

TOPICS:

- General overview, theoretical background, benefits and challenges of the opensource approach in simulation of nuclear reactors
- OpenMC Monte-Carlo Neutron Transport Code: Applied to both fission reactors and fusion systems



LOCAL ORGANISER:

Nicola Seriani, ICTP, Italy

- OpenFOAM and its Derivatives for Computational Fluid Dynamics (CFD) simulations of nuclear reactor thermal hydraulics and coupled neutronics, including GenFOAM
- MOOSE Parallel Finite Element Framework: Employed for multi-physics and multiscale simulations, and
- ARMI (Advanced Reactor Modelling Interface): Providing an interface for advanced reactor modelling

CALL FOR CONTRIBUTED ABSTRACTS:

In the application form, all applicants are requested to submit a brief abstract for a poster presentation. A limited number of contributed abstracts will be selected for the poster session. The best poster will be awarded a certificate of appreciation.



FURTHER INFORMATION:



E-mail: smr4103@ictp.it

Web: http://indico.ictp.it/event/10868/

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.

