



The Abdus Salam
**International Centre
for Theoretical Physics**



Joint IAEA-ICTP Workshop on Reactor Physics, Thermal Hydraulics and Plant Design Engineering of Small Modular Reactors

DESCRIPTION:

Many countries are exploring nuclear power as a part of their future energy mix and looking towards deployment of small modular reactors (SMRs), either for electricity or non-electric applications. This course will cover reactor physics, thermal hydraulics and plant design engineering SMRs focusing on integral pressurized water reactors (i-PWR), modular high temperature gas-cooled reactors, molten salt reactors and microreactors.

MORE INFORMATION:

The IAEA organizes various training courses, workshops and technical meetings encompassing all aspects relevant to the development, deployment, and oversight of SMRs and their applications. The proposed workshop is part of a broader program aimed at improving understanding of analytical computer codes for SMR design, with a particular focus on modular HTGR types. In addition, design engineering for nuclear power plants using molten salt and HTGR technologies has become an important focus, given the global challenges posed by limited experience in constructing and operating installations based on these technologies.

Poster Presentation

As part of the application, participants should submit a poster abstract, covering one of the course topics of their choice. The posters will be displayed and presented in a dedicated session during the event.

Participants will be given approx. 5 minutes for their presentation of their poster.

The top 5 posters will be selected, and authors will prepare a 10-minute slide-presentation. The lecturers and participants will vote, and the best presenter will be announced at the closing of the course.

TOPICS:

- Global scenarios for nuclear energy: discussing the roles of SMRs in energy strategies
- Status of advanced research, design and technology developments for integral PWR, molten salt reactors, modular high temperature gas cooled reactors and microreactors
- Users' training of selected computer codes for design and safety analyses of modular high temperature gas cooled reactors
- Approaches to reactor physics and thermal-fluid design calculations
- Power plant design engineering
- Non-electric applications of SMRs, exploring the use of SMRs for district heating, desalination, hydrogen production, industrial and outer space applications.



13 - 17 April 2026



Trieste, Italy



**Deadline:
18 January 2026**

DIRECTORS:

A. Constantin, IAEA, Austria
M.H. Subki, IAEA, Austria

LOCAL ORGANIZER:

N. Stojic, ICTP, Italy

FURTHER INFORMATION:

E-mail: smr4212@ictp.it

Web: <https://indico.ictp.it/event/11138/>

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.

