

About

The 14th International Topical Meeting on Nuclear Reactor Thermal-Hydraulics, Operation, and Safety (NUTHOS-14) will take place in Vancouver, Canada from August 25-28, 2024. NUTHOS-14 will be hosted by the Canadian Nuclear Society (CNS), and co-hosted by the American Nuclear Society (ANS), the European Nuclear Society (ENS), and the Korean Nuclear Society (KNS). Vancouver is one of the premier conference sites in the world owing to its easy to access location, diversity of attractions, and closeness to nature.

The NUTHOS conference is held in principle every two years. The first was held in Taipei in 1984 followed by Tokyo (1986), Seoul (1988), Taipei (1994), Beijing (1997), Nara (2004), Seoul (2008), Shanghai (2010), Kaohsiung (2012), Okinawa (2014), Gyeongju (2016), Qingdao (2018), and Hsinchu (2022). NUTHOS has become one of the major events in the field and we are excited to host the first in-person NUTHOS since 2018!

NUTHOS-14 will cover eight technical tracks including Thermal-Hydraulics and Computational Methods, Experimental Thermal-Hydraulics, Safety and Severe Accidents, Thermal-Hydraulics and Safety of Advanced Reactors, Plant Operation and Maintenance, Diagnostics and Monitoring, Small Modular Reactors and Micro Reactors, and Artificial Intelligence applications.

We sincerely invite you to contribute and participate in NUTHOS-14. Mark the dates and promote NUTHOS-14 to your community. We trust this will be a very successful event and exciting conference to examining the key roles of innovation in nuclear thermalhydraulics, operations and safety.

Thank you to our Co-Sponsoring Organizations



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Honorary Chairs

Prof. Jong H. Kim
Retired KAIST and EPRI, Korea

Prof. John C. Luxat
Department of Engineering Physics,
McMaster University, Canada

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Dipartimento di Energia, Politecnico
di Milano, Italy, Professor Emeritus,
Tokyo Institute of Technology, Japan

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Prof. David Novog
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Nuclear Science & Engineering,
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Department of Nuclear
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University, United States

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Tokyo, Japan

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Institute for Advanced
Research in Multiphase Flow
and Energy Transfer, Delta
Energy Group, New York
(DEGNY) / Qingdao (DEQD)

Prof. Yican Wu
Academician of Chinese
Academy of Sciences

Call for Papers

Key Dates

Abstract Deadline
November 30, 2023

Draft Papers
January 31, 2024

Final Papers
May 1, 2024

Early Registration Closes
June, 2024



List of Proposed Topics

General Thermal Hydraulics

- Fundamental Thermal-Hydraulic Phenomena
- Two-Phase Flow Fundamentals
- Reactor Core Thermal Hydraulics (including Subchannel Analysis and Computational Fluid Dynamics)
- Natural Circulation and Passive System Modeling
- Thermal-Hydraulics and Safety of Water-Cooled Reactors (including SMRs)
- Code Development and V&V
- General Topics

Advanced Thermal-Hydraulic Modelling and Experiments

- Boiling and Condensation
- Turbulence Modeling
- Advances in Numerical Methods
- CFD Methods and Application to Nuclear Engineering
- Multi-Scale and Multiphysics Coupling Simulation
- Separate-Effect and Integral-Effects Experiments
- Advanced Measurement Techniques
- Thermal-Hydraulic Scaling

Plant Operations

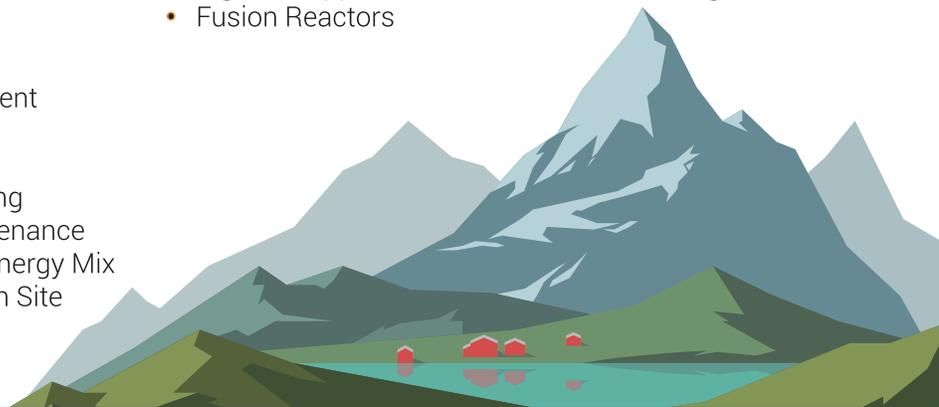
- Safety Culture
- Plant Transient Behavior and System Improvement
- I&C and Inspection, Diagnosis and Maintenance
- Plant Licensing Renewal and Life Extension
- Plant Simulators, Analyzers and Operator Training
- PRA Application to Design, Operation and Maintenance
- Reactor Operation in Accordance with Volatile Energy Mix
- Waste Management and Radiation Protection on Site
- Fuel Management
- Decommissioning

Regulation, Accident Analysis and Source Term

- Regulation, Accident Analysis and Source Term
- Risk Informed Methods and Performance-based Regulation
- Emergency Planning, Zoning and Requirements for SMRs
- Environmental Nuclear Safety
- Design Basis Accidents
- Severe Accidents Analysis, Mitigation and Management
- In-Vessel and Ex-Vessel Related Phenomena
- Containment Thermal-Hydraulics and Source Term

Thermal Hydraulics and Safety of Advanced Reactors and Special Topics

- Generation IV Technologies (Liquid Metal-Cooled Reactors, Gas-Cooled Reactors, Molten Salt Reactors, Supercritical Water Reactors) and Microreactors
- Advanced-Technology Fuels
- Machine Learning and Artificial Intelligence in Nuclear Engineering
- Big Data Applications and Related Challenges
- Fusion Reactors



Abstract Deadline November 30, 2023

Text must not exceed 250 words, including a brief background, objective, and highlights of the work. A4 size sheet (210mm x 297mm), with 25mm margins on all sides. Use 11 point Times New Roman (or an equivalent font) with single spacing. Leave two blank lines before "ABSTRACT".

The keywords listing of at most five key words shall be included after the abstract.



CALL FOR PAPERS

**Deadline to Submit:
Wednesday, November 30, 2023**

[NUTHOS-14.ORG/CALL-FOR-PAPERS](https://nuthos-14.org/call-for-papers)