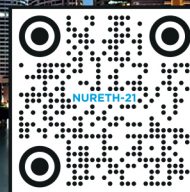


# NURETH-21

21<sup>st</sup> International Topical Meeting on Nuclear Reactor Thermal Hydraulics

August 31 (Sun) - September 5 (Fri), 2025  
BEXCO • Busan, Korea

[www.nureth-21.org](http://www.nureth-21.org)



Hosted by  한국원자력학회  
KOREAN NUCLEAR SOCIETY

Sponsored by  ANS



 日本原子力学会  
Atomic Energy Society of Japan (AESJ)

 中国核学会  
Chinese Nuclear Society

Supported by  부산관광공사  
BUSAN TOURISM ORGANIZATION

## CALL FOR PAPERS

### IMPORTANT DATES

- Abstract submission deadline
- Author notification of acceptance
- Full paper submission deadline
- Full paper review notification
- Final paper submission deadline

**October 25, 2024**  
**November 15, 2024**  
**January 31, 2025**  
**March 15, 2025**  
**May 2, 2025**

### GUIDELINES

#### Step 1. Online submission of Abstracts

- English abstract (text only, no template) of 250 words.
- Enter 5 keywords (max.)
- Select your preferred technical topic number and presentation type between Oral, Poster and Either.

#### Step 2. Online submission of Full Papers

- Once abstracts have been accepted, authors may then submit 14-pages full papers.
- Use provided template.

#### Step 3. Online submission of Final Papers

- Once full papers are reviewed and approved, author may then submit their revised final paper.
- Use provided template.

### TECHNICAL TRACKS

#### 1. Fundamental Thermal Hydraulics

- General Fundamental Thermal Hydraulics
- General Single Phase Thermal Hydraulics
- Two-Phase Flow and Heat Transfer
- Boiling and Condensation
- Critical Heat Flux (CHF) and DNB
- Core and Sub-Channel Thermal Hydraulics
- Natural Circulation
- Thermal Hydraulic Scaling
- Instabilities and Special Thermal Hydraulic Phenomena
- Turbulence

#### 2. Computational Thermal Hydraulics

- Computational Fluid Dynamics
- Computational Multi-Fluid Dynamics
- Sub-channel Analysis
- System Code Analysis
- Multi-Field Analysis and Modelling
- High-Fidelity Coupled Analysis
- DNS and LES
- Uncertainty Quantification and Best Practice Guidelines for Analysis

#### 3. Experimental Thermal Hydraulics

- Measurement Techniques and Visualization
- SET & IET (1): Operating Reactors
- SET & IET (2): Advanced Reactors
- CFD-grade Tests
- Experiments and Databases for Validation
- Rod Bundle Experiments
- CHF for SMR and Accident Tolerant Fuel
- Uncertainty Quantification and Best Practice Guidelines for Experiments

#### 4. Water-cooled Reactor Thermal Hydraulics

- LWR Operation and Safety
- LWR Transient and Accident Analysis
- ALWR Thermal Hydraulics and Safety
- ATF and LEU+ Issues
- Long-term Operation and Flexible Operation
- BEPU Methodology and Analysis



## 5. Severe Accident

- Severe Accident Scenario and Source Term
- Fuel-Concrete Interaction and Debris Cooling
- In-Vessel Retention and Coolability
- Ex-Vessel Retention and Coolability
- Fission Product Behaviors
- Containment Thermal Hydraulics and Safety
- Hydrogen Issues and Management
- Severe Accident Mitigation for Water Cooled Reactor
- Severe Accident Mitigation for Advanced Reactor
- Risk-informed Safety Assessment

## 6. Advanced Reactor Thermal Hydraulics and Safety

- Water-cooled SMRs
- Non-water-cooled SMRs
- Micro-Reactors
- Space Applications
- Marine Applications
- Non-electricity Generation Applications
- Test/Research Reactors
- Molten Salt Reactors
- Gas-Cooled Reactors
- Liquid Metal Reactors: SFR, LFR
- Other Advanced Reactors
- Thermal Hydraulics in Fusion Reactors

## 7. Digital Technologies for Thermal Hydraulics

AI Application to Thermal Hydraulics  
AI Application to Operation and Safety  
Virtual Reactor Design  
Monitoring and Diagnosis of Thermal Hydraulics  
Models & Simulation

## 8. Special Topics

- Passive Autocatalytic Recombiners
- Thermal Hydraulics in Waste Management
- Fluid-Structure Interaction
- Post-Fukushima Safety Issues
- Reliability of Passive Systems
- Integrated Energy Systems
- Multi-Organizational Cooperative Programs
- International Cooperative Programs

## ABOUT THE MEETING

NURETH is the premier gathering for experts in nuclear reactor thermal hydraulics and related topical areas. This meeting is held every two years. The Thermal-Hydraulic Division of the Korean Nuclear Society is pleased to host NURETH-21 in Busan, Republic of Korea. Busan is an ideal location for the NURETH-21 participants for their dedicated discussion of the future of nuclear thermal-hydraulics and their relaxation with cultural experiences on the world-famous seashore area. We are excited and looking forward to welcome participants to NURETH-21 from around the world to a world-famous nuclear city.

## EXECUTIVE CHAIRS

### General Chairs

Chul-Hwa Song, KAERI  
Stephen M. Bajorek, USNRC  
Francesco D'Auria, UNIPI

### Honorary Chairs

Goon-Cherl Park, SNU  
Yassin A. Hassan, TAMU  
Hisashi Ninokata, TIT

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Sama Bilbao y Leon, WNA

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W. Dave Pointer, ORNL  
Bao-Wen Yang, DEQD  
Yanping Huang, NPIC

### Organizing Committee Chairs

Byong Jo Yun, PNU  
Wade Marcum, OSU  
Kyoung-Ho Kang, KAERI

## WEBSITE OPEN ([www.nureth-21.org](http://www.nureth-21.org))

The NURETH-21 official website has been opened and on-line abstract submission is available from June 10 (Mon), 2024. Starting in September, you can register, pay registration fees, and make hotel reservations through the website.

## NURETH-21 Secretariat

For any inquiries related to the NURETH-21, please feel free to contact the NURETH-21 secretariat.



- For technical program inquiries at [paper@nureth-21.org](mailto:paper@nureth-21.org)
- T. +82-2-538-2042~3