

First Announcement and Call for Papers

NUTHOS-11

11th International Topical Meeting on Nuclear Thermal-Hydraulics, Operation and Safety

October 9 – 13, 2016 HICO, Gyeongju, Korea

About the Symposium

International Topical Meeting on Nuclear Reactor Thermal Hydraulics, Operation and safety (NUTHOS) is an important series of international topical meetings in the fields of thermal hydraulics, operation, safety, and related areas. NUTHOS has served for international nuclear society as an open forum where high-quality and up-to-date information is actively discussed and exchanged among world-class experts.

NUTHOS proves to be an important series of international topical meetings in the area of thermal hydraulics, operation and safety of nuclear power plant. NUTHOS has provided the global nuclear community with an open forum where premium state-of-the art information is exchanged among the specialists and executives. Now the eleventh of the series, NUTHOS-11, calls for the up-to-the minute knowledge and leading-edge research results from both hemispheres.

It is our greatest pleasure to welcome you all to this important international conference.

Preliminary Topics

1 Fundamentals of Thermal Hydraulics

- 1.1 Single- and Two-Phase Flow Fundamentals
- 1.2 Sub-channel Flow Dynamics and Analysis
- 1.3 CHF and post-CHF Heat Transfer
- 1.4 Boiling and Condensation Heat Transfer
- 1.5 Nano-Fluid Thermal-Hydraulics
- 1.6 Scaling Issues

2 Computational Thermal-Hydraulics

- 2.1 Advances in Numerical Methods and Modeling
- 2.2 Code Development and V&V
- 2.3 CFD Application to Nuclear Reactor System Design and Safety Analysis
- 2.4 Multi-Scale and Multi-Physics Calculations
- 2.5 Accuracy and Uncertainty Analysis including CFD Codes

3 Experimental Thermal-Hydraulics

- 3.1 Single- and Two-Phase Flow Experiments
- 3.2 Experiments for Code Verification and Validation
- 3.3 Containment Analysis and Experiments
- 3.4 Steam Generator Thermal-Hydraulic Experiment and Analysis
- 3.5 Passive System Performance and Analysis

4 Multi-disciplinary Thermal-Hydraulics

- 4.1 Thermal Hydraulics with Chemical Reactions
- 4.2 Thermal Hydraulic Loads and Flow-Induced Vibration
- 4.3 Thermal Hydraulics Related to Nuclear Fuel Safety
- 4.4 Thermal Hydraulics with Materials and Water Chemistry
- 4.5 Multi-Physics Experiments and Analysis

5 Severe Accidents

- 5.1 Severe Accident Analysis and Accident Management
- 5.2 Degraded Core Thermal Hydraulics
- 5.3 Fuel-Coolant Interaction and Steam Explosion
- 5.4 Hydrogen and Fission Product Behavior
- 5.5 Debris Bed Coolability
- 5.6 Advanced Design Features for Mitigation

6 Plant Operation and Maintenance

- 6.1 Plant Transients and Accidents Analysis and Testing
- 6.2 Plant Licensing Renewal and Life Extension
- 6.3 Plant Reliability Improvement and Safety Culture
- 6.4 Risk-Informed and Performance-Based Regulation
- 6.5 Application of Big Data for Plant Diagnosis

7 Plant Diagnostics and Monitoring

- 7.1 Steam Generator Operation and Maintenance
- 7.2 Plant Simulators, Analyzers, Operator Training
- 7.3 Probabilistic Risk Analysis to Design, Operation and Maintenance
- 7.4 Waste Management and Spent Fuel Pool Thermal Hydraulics
- 7.5 Environmental Nuclear Safety

8 Advances in Measurements and Instrumentations

- 8.1 Advanced Flow Visualization Techniques
- 8.2 Advanced Radiation Measurement and Techniques
- 8.3 Advanced Measurement Techniques in Non-Water, Extreme Environment
- 8.4 Application of Innovative Measurement Technology

9 Thermal-Hydraulics and Safety of Advanced Reactors

- 9.1 SFR Thermal Hydraulics, Design and Safety Analysis
- 9.2 Gas Cooled Reactor Thermal Hydraulics
- 9.3 MSR Thermal Hydraulics, Design and Safety Analysis
- 9.4 Supercritical Reactor Thermal Hydraulics
- 9.5 Research Reactor Operation and Thermal Hydraulics
- 9.6 Others

10 Special Sessions

- 10.1 Containment Thermal-Hydraulics
- 10.2 Hydrogen Management
- 10.3 SMR
- 10.4 Safety Analysis of Design Extension Conditions
- 10.5 Coolability of Damaged Fuels
- 10.6 OECD/NEA International Programs
- 10.7 Other Topics (To be determined)

Website and further information

<http://www.nuthos-11.org/> (mailto: info@nuthos-11.org)

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Sponsors

- KNS** Korean Nuclear Society
ANS American Nuclear Society
AESJ Atomic Energy Society of Japan

To be added

Important Dates

December 15, 2015	Submission of abstract
January 31, 2016	Notification of abstract acceptance
April 20, 2016	Submission of full-paper
June 15, 2016	Full-paper acceptance notification
July 15, 2016	Submission of final full-paper
August 31, 2016	Last day of pre-registration
October 9, 2016	Date of meeting

Submission of Abstract

Authors are invited to submit a one-page 500 word abstract (text only) to the NUTHOS-11 Website (<http://www.nuthos-11.org>) no later than **Dec. 15, 2015**. The review results will be sent to the corresponding authors by the end of **January 31, 2016**.

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- CNS** Chinese Nuclear Society
CNS Canadian Nuclear Society
KFSM Korean Society for Fluid Machinery

