NURETH-16

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16th International Topical Meeting on Nuclear Reactor Thermal Hydraulics

August 30—September 4, 2015
Hyatt Regency, Chicago, Illinois, USA

CALL FOR PAPERS

Honorary Chair	
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General Chairs	
Prof. M. Corradini	University of Wisconsin
Prof. H. Ninokata	Politecnico di Milano
Technical Program Chairs	
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Prof. H. C. No	KAIST
Prof. N. T. Dinh	North Carolina State University

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Dr. W. D. Pointer	Oak Ridge National Laboratory
Steering Committee Chair	
Dr. M. Peters	Argonne National Laboratory
Local Organizing Committee Chair	
Dr. R. Klann	Pacific Northwest National Laboratory

Sociedad Nuclear Mexicana

Paper Deadlines

~~Abstract Submission Deadline: **1/5/2015**~~
~~Abstract Acceptance: **1/5/2015**~~
~~Full-Length Paper Submission: **03/23/2015 (Extended)**~~
Review Notification: **04/30/2015**
Final Paper: **05/31/2015**

The page limit for NURETH-16 papers is **14 pages**. Color figures are allowed in full papers since the publication distributed at the meeting will be a flash drive.

Selected papers will be published in a special edition of *Nuclear Technology* and *Nuclear Science and Engineering* journals.

About the Meeting

The Chicago Local Section of the American Nuclear Society (ANS) is pleased to host the ***16th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-16)*** at the Hyatt Regency Chicago from August 30 – September 4, 2015.

Chicago is one of America's greatest cities, and one of the most easily accessible destinations in the U.S. for travelers from around the world due to its central location. Chicago has a proven history of hosting past ANS meetings, including the 2012 Annual Meeting.

NURETH-16 attendees will be a short distance from Chicago attractions, such as Navy Pier, architectural boat tours, theatrical and musical entertainment, and countless dining and shopping options.

Building on the foundation of past meetings, including NURETH-15 in Pisa, Italy, NURETH-16 will invite experts in the field of thermal hydraulics from around the world to share their research and discuss important issues related to nuclear reactor thermal hydraulics.

NURETH-16 will also be a venue for organizations to showcase their expertise in nuclear reactor technology, with several opportunities for meeting sponsors to exhibit their products and services to the nuclear reactor thermal hydraulics community.

Questions: nureth16@anl.gov

NURETH-16

TOPICS AND SESSIONS

1. Basic Thermal Hydraulics

a. Two-Phase Flow and Heat Transfer Fundamentals, including Experimental Thermal Hydraulics and Instrumentation
b. Boiling and Condensation Fundamentals
c. Multifield Two-Phase Flow Modeling
d. Flow-Induced Vibration in Reactor Components
e. Supercritical Fluids Thermal Hydraulics and Heat Transfer
f. Interfacial Area Transport (Database, Modeling, Measurement Techniques)
g. Microscale and Nanoscale Phenomena
h. Natural Circulation, Passive Safety Systems and Related Phenomena
i. Subchannel Fluid Dynamics and Heat Transfer Experimental Measurement Techniques and Flow Visualization

2. Code Development Including Numerics (System TH and CFD)

a. Computational Fluid Dynamics (DNS, LES, RANS, etc.)
b. Computational Multi-Fluid Dynamics
c. Core Thermal Hydraulics and Subchannel Analysis
d. Plant System Code Development
e. Boron Dilution/Mixing
f. Steam Generator Thermal Hydraulics
g. Pressure Surges in Nuclear Power Plants
h. Containment Analysis
i. Accuracy and Uncertainty Analysis
j. Fast Transient Modeling
k. Enhanced Near–Wall Flow and Heat Transfer Modeling
l. Fluid and Structures Mechanical Interactions
m. Multiscale Multiphysics Applications in Thermal Hydraulics

3. Code V&V, Design and Operation of SETF Including Instrumentation

a. Computational Fluid Dynamics V&V (DNS, LES RANS, etc.)
b. Computational Multi-Fluid Dynamics V&V
c. Core Thermal Hydraulics and Subchannel Analysis V&V
d. Plant System Code Validation
e. Experiments and Databases for Assessment and Validation (including of 3D Models)
f. Boiling and Condensation Heat Transfer
g. CHF and Post CHF Heat Transfer, Flooding and CCFL
h. Containment Analysis
i. Boron Dilution/Mixing
j. Experiment Design for V&V

4. Operation & Safety of Existing Reactors

a. Plant Life Extension and Power Up-Rating
b. Instabilities and Nonlinear Dynamics
c. NPP Transient and Accident Analysis
d. Safety of Sodium-Cooled Reactors
e. Safety of VVER Reactors
f. Full Spectrum LOCA Evaluation Methodology
g. BEPU Analysis and Challenges in Licensing
h. Addressing Scaling Issues

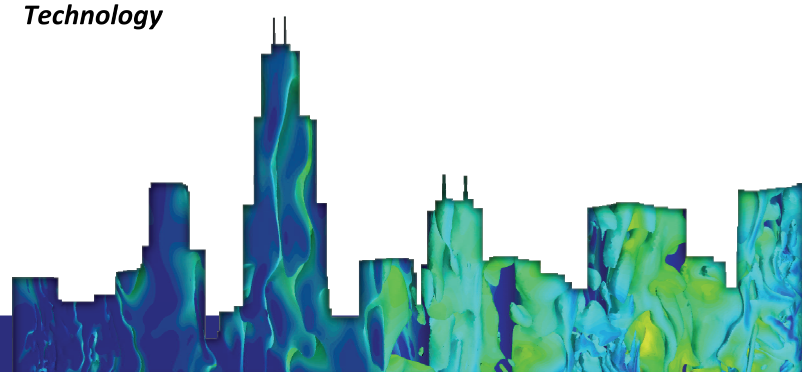
5. Severe Accidents

a. Molten Core Natural Convection and Physical-Chemical Phenomena
b. Modeling and Experiments of Severe Accidents
c. Natural Convection and Mixing Phenomena, Modeling
and Experiments
d. Fuel Coolant Interaction, Modeling and Experiments
e. Direct Containment Heating by Dispersed Molten Fuel
f. Debris Bed Cooling
g. Combustion and Fires, Modeling and Experiments
h. Advanced Design Features for Severe Accident Mitigation
i. Analytical Activities on the Accident Progression and In-core Status of Fukushima Dai-ichi Units
j. Hydrogen and Fission Product Behavior

6. Thermal Hydraulics in Advanced Reactors

a. Thermal Hydraulics in High-Temperature Gas-Cooled Reactors
b. Thermal Hydraulics in Salt-Cooled High-Temperature Reactors
c. Thermal Hydraulics in Sodium-Cooled Fast Reactors
d. Thermal Hydraulics in Supercritical Water Reactors
e. Thermal Hydraulics in Lead-Cooled and Lead-Bismuth -Cooled Fast Reactors
f. Thermal Hydraulics in Small Modular Reactors

Others, including Waste Management & Fusion Technology



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7. Special Sessions

7a. Advancements in the Prediction of DNB with CFD, *E. Baglietto*
7b. NEAMS Sponsored Advances in Thermal Hydraulics Modeling and Simulation, *J. Thomas*
7c. The NURESAFE European Project: Multiscale Thermal Hydraulic Analyses, *D. Bestion*
7d. CFD Modelling of Fuel Assemblies: From High Fidelity to Low Resolution Models, *F. Roelofs*
7e. Hydrogen Management after Fukushima, *E. Komen*
7f. Design, Analysis and Testing of Micro-, Mini- and other Small-Diameter Channel Heat Exchangers, *P. Ferroni*
7g. Advancements in SFR Thermal Hydraulics, *T. Sofu*
7h. OECD/NEA Benchmark Study of the Accident at the Fukushima Dai-ichi Nuclear Power Plant, *M. Pellegrini and R. Gauntt*
7i. Heat Transfer in Supercritical Flows, *M. Rohde and X. Liu*
7j. Advances in Instrumentation and Measurement Techniques for V&V, *Y. Hassan and S. Lomperski*
7k. Addressing the GSI-191: Progress in Methodologies and Technologies, *R. Vaghetto*
7l. Advancements in Subchannel Analysis, *D. Aumiller and H. Ninokata*
7m. Thermal Hydraulic Experiments and Numerical Analyses in Support of the MYRRHA, *K. Van Tichelen*
7n. CFD Benchmark of NESTOR High Fidelity PWR Rod Bundle Data at In-Core Conditions, *D.M. Wells and Y. Hassan*
7o. Realistic BWR LOCA Evaluation: Methodology Development and Application, *K. Muftuoglu*
7p. FHR Integral and Separate Effects Test Experiments, *P. Peterson and X. Sun*
7q. Issues and Advances for Application of Thermal Hydraulic Codes to FHRs, *P. Peterson and X. Sun*
7r. Advances in System Thermal-Hydraulics Modeling and Code Development, *R. Hu and C. H. Song*
7s. CASL—Thermal Hydraulics Activities in the Consortium for Advanced Simulation of LWRs, *I. Bolotnov*
7t. Design Extension Conditions for Strengthening the DID: Focusing on Preventing Severe Accidents, *C. H. Song*
7u. Molten Core Relocation Modeling, *H. Ninokata*
7v. Critical Heat Flux in Fuel Bundle: Modeling, Prediction, and Experimental Measurements, *B.-W. Yang*
7w. Advances in CANDU Thermal Hydraulics, *J. Luxat and D. Novog*
7x. HPC Applications in Nuclear Engineering: Opportunities and Challenges, *E. Merzari and S. Benhamadouche*
7y. Corium Research Platform: Past and Future, *J. H. Song, S. Basu*
7z. Modelings and Experiments of IVR and Core Catcher Strategies, *Y. H. Jeong*
7aa. Recent Studies for Improvement of Subcooled Boiling Heat Transfer Model: Experiment, Theory, and Simulation, *H. Kim*
7ab. Passive Safety System and Accidents Measures, *I.C . Bang*
7ac. Multi-component Reactive Flow in the Next Generation Nuclear Systems, *J. I. Lee*
7ad. Advances in Enhancement, Understanding and Prediction of CHF and Quenching, *I. C. Bang, H. Kim and S. J. Kim*
7ae. Investigation of Reflood Phenomena in Partially Blocked Core with Fuel Relocation, *C.-H. Song and F. Barre*
7af. Research Progress of Large Advanced PWR Program in China, *P. Chen*
7ag. Important Severe Accident Research Issues after Fukushima Accidents, *J. Sugimoto*

The Program Committee realizes that there is significant overlap between the special sessions and regular sessions, as well as partial overlap among the special sessions. This was done on purpose to stimulate papers and contributions. Sessions may be consolidated at the conclusion of the abstract submission.