⊕ANS® CALL FOR PAPERS

Advances in Thermal Hydraulics (ATH 2026)

November 15-18, 2026 | Phoenix, AZ | Arizona Grand Resort & Spa

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SUBMIT A PAPER, SUMMARY, OR ABSTRACT
https://apps.ans.org/esr/event-ath2026/

PROGRAM SPECIALIST
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IMPORTANT DEADLINES

SUBMISSION OF PAPERS, SUMMARIES, AND ABSTRACTS JUNE 26, 2026	AUTHOR NOTIFICATION OF ACCEPTANCE JULY 27, 2026	REVISIONS DUE AUGUST 7, 2026

ABOUT THE CONFERENCE

Papers, summaries, and abstracts are solicited for the Advances in Thermal Hydraulics (ATH 2026), to be held as an embedded topical meeting at the 2026 ANS Winter Meeting on November 15-18 at the Arizona Grand Resort and Spa in Phoenix, AZ. Organized by the American Nuclear Society Thermal Hydraulics Division, this embedded topical meeting is the eighth in a growing series featuring peer-reviewed, full-length technical papers covering recent advances in thermal hydraulics. Authors and presenters are cordially invited to participate in this event to exchange ideas and knowledge, develop strong relationships across organizations, and establish collaborations to solve challenging problems.

SUBMITTAL GUIDELINES

Paper, summary, and abstract acceptance will be based upon originality of the work, strictly implemented methods or models, quality of results, impact of the scientific advances to the field of thermal hydraulics, conclusions supported by data, proper citation of references, and use of correct grammar and spelling.

Full papers must be submitted to tracks 1-10 and must use the ATH conference template and formatting. The recommended paper length is 8-10 pages. The maximum allowable length is 14 pages. Papers with more than 14 pages will be rejected. Selected full papers will be invited to a special issue of Nuclear Technology.

Summaries must be submitted to Track 11 and should be a maximum of four (4) pages. If an exception is made and a summary with more than four pages is accepted, page charges of $100/page will apply starting with p. 5. Summaries must use the ANS template and formatting.

Abstracts must be submitted to Track 12 and must be no more than maximum of one (1) page. For this option, you will not submit a full paper or summary later. Use the abstract template.

FORMATTING GUIDELINES

- Your paper, summary, or abstract should be submitted in PDF format
- Do not include headers, footers, page numbers, bookmarks, text highlighting, or hyperlinks to references, figures, and tables in the text of your your paper, summary, or abstract in your final PDF document. Do not save your document as "read only."
- Do not use all capital letters for the title or any part of any authors' names. For the title of the paper, Capitalize the First Letter of Major Words. Author names should be First Name or Initial(s) followed by Last Name.

- The names of all authors should be entered into the Authors page in the Electronic Paper Submission and Review (EPSR) system. List the authors in the same order in which their names appear in the abstract.
- Author information in the conference program is derived from the entries in the EPSR's Authors page.
- In the EPSR, authors' affiliations should match the affiliation provided in the abstract itself. If an author has multiple affiliations, enter the ONE that should be included in the program, assuming the abstract is accepted.

CONTENT

1. Introduction: State the purpose of the work.
2. Description of the actual work: Must be new and significant.
3. Results: Discuss their significance.
4. References: If any, must be closely related published works. Minimize the number of references.
5. Do not present a bibliographical listing.

6. If a disclaimer is required (e.g., related to the author's employer), it is the author's responsibility to include the disclaimer in the summary as either an end-of-summary note (preferred) or footnote. Please ensure such footnotes do not interfere with the bottom margin, and do not format disclaimers as headers or footers.

1. FUNDAMENTAL THERMAL-HYDRAULICS
1a. Boiling and Condensation Phenomena
1b. Experimental Methods and Instrumentation
1c. Fluid-Structures and Materials Interaction
1d. Heat Transfer Enhancement Phenomena
1e. Micro-Channel Flow and Heat Transfer Phenomena
1f. Rod Bundle Flow and Heat Transfer Phenomena
1g. Two-Phase Flow and Heat Transfer Fundamentals

2. CODE DEVELOPMENT AND APPLICATIONS
2a. Applications of Computational Methods to Nuclear Systems
2b. Computational Fluid Dynamics Methods
2c. Multiphysics-Coupled Thermal-Hydraulic Analysis Methods
2d. Multiscale Methods
2e. Novel System Code Development
2f. Subchannel Analysis Methods
2g. System Thermal Hydraulics Methods
2h. Verification & Validation Methods for Thermal Hydraulics Analyses

3. THERMAL HYDRAULICS OF OPERATING LWRS
3a. Best Estimate LOCA and BEPU Analysis
3b. Operating LWRs Thermal Hydraulics
3c. Thermal Hydraulics in Power Uprating/Life Extension
3d. Thermal Hydraulics Challenges and Opportunities in LWRs
3e. Thermal Hydraulics of Water Chemistry

4. SEVERE ACCIDENTS, PHENOMENA, MODELING AND EXPERIMENTS
4a. Combustion and Fires, Modeling and Experiments
4b. Thermal Hydraulics in Accident Management
4c. Thermal Hydraulics of Severe Accidents – Fundamentals

5. THERMAL HYDRAULICS OF ADVANCED REACTORS
5a. General Advanced Reactor Thermal Hydraulics
5b. Gas-Cooled Reactor Thermal Hydraulics
5c. Microreactor Thermal Hydraulics
5d. Molten-Salt Reactor Thermal Hydraulics
5e. Next Generation LWR Thermal Hydraulics
5f. Small Modular Reactor Thermal Hydraulics
5g. Liquid Metal Cooled Fast Reactor Thermal Hydraulics

6. THERMAL HYDRAULICS OF NUCLEAR INSTALLATIONS
6a. Thermal Hydraulics of Energy Storage for Nuclear Systems
6b. Thermal Hydraulics of Nuclear Hydrogen Production Systems
6c. Thermal Hydraulics of Used Fuel Management Systems
6d. Thermal Hydraulics of Nuclear-Renewable Coupled Energy Systems

7. THERMAL HYDRAULICS FOR FUSION SYSTEMS AND COMPONENTS
7a. General Thermal Hydraulics for Fusion Systems
7b. Divertors and Plasma-Facing Components
7c. Blanket Cooling
7d. Heat Exchangers
7e. Diagnostics Cooling
7f. Fueling Components

8. AI & ML FOR NUCLEAR THERMAL HYDRAULICS
8a. General AI & ML Applications in Thermal-Hydraulics
8b. AI & ML Assisted High-Fidelity Modeling
8c. AI & ML Based Reduced Order Modeling

9. SPECIAL SESSIONS
9a. Advances in High-Fidelity Measurements and Data Analysis
9b. Direct Numerical Simulations as High-Fidelity Data for Model Development
9c. High Performance Computing Applications in Nuclear Engineering
9d. Interface-Resolved Two-Phase Flow Simulation
9e. NEAMS TH IRP: Thermal-Fluids Applications in Nuclear Energy

10. YOUNG PROFESSIONALS RESEARCH COMPETITION
Lead authors and presenters who are under the age of thirty-six (36) or are within five (5) years of graduation from an accredited educational institution at the time of the conference are encouraged to submit full papers on any of the listed topics to this session to compete in the annual Thermal Hydraulics Research Competition. A prize for the best presentation will be awarded.

11. THERMAL HYDRAULICS SUMMARIES
Submit a summary on any of the listed topics that is a maximum of four (4) pages.

12. THERMAL HYDRAULICS ABSTRACTS
Submit an abstract on any of the listed topics that is a maximum of one (1) page. For this option, you will not submit a full paper or summary later.