



Global and Top Fuel 2019

September 22-26, 2019 | Seattle, Washington USA | The Westin Seattle



ORGANIZED BY ANS
IN COOPERATION AND
THE SUPPORT OF:



CALL FOR PAPERS

EXECUTIVE CHAIRS

Global General Chair
Dorothy Davidson, Orano

Global Program Chair
Jack Law, Idaho National Laboratory

Top Fuel General Chair
John Stumpell, Framatome

Top Fuel Program Chairs
Randall Dunavant, Southern Nuclear
Stephen Mazurkiewicz, Framatome

ABSTRACT DEADLINE: MARCH 15, 2019

- MARCH** → SUBMISSION OF ABSTRACTS: **March 15, 2019**
- MARCH** → AUTHOR NOTIFICATION OF ACCEPTANCE: **March 20, 2019**
- MAY** → FULL PAPER DUE DATE: **May 3, 2019**
- MAY** → FULL PAPER REVIEW NOTIFICATION: **May 31, 2019**
- JUNE** → FINAL FULL PAPERS DUE: **June 21, 2019**

MEETING DESCRIPTION

Global is the leading international meeting on the nuclear fuel cycle held every other year, alternating between Asia, Europe and the US. Bringing these two meetings together will give managers, scientists and engineers an opportunity to share ideas and enter into mutually beneficial collaborations.

TopFuel is the preeminent international meeting on new developments in LWR fuel performance held every year, alternating between Asia, Europe and the US.

PAPER ACCEPTANCE CRITERIA

Papers are expected to contain descriptions of work that is new, significant, and relevant to the conference purposes. Both abstracts and full papers will be reviewed prior to acceptance. Submissions should contain new data and investigations in scientific or program areas that are of general interest, address problems of interdisciplinary significance, or include in-depth discussions of scientific and technical issues related to public-policy questions.

Criteria for selection include originality of work, relevance of topic, validity of method, clarity and conciseness of communication, and adherence to the scientific method (if appropriate). Compliance with content and length guidelines (following) are also part of the acceptance requirements. Both abstracts and full papers must be submitted electronically to www.ans.org/meetings. Papers may be submitted for oral or poster presentation. All submissions must be in English.

SUBMISSION OF ABSTRACT

- Abstracts must be submitted electronically in ASCII text, HTML, Word, WordPerfect, and/or PDF (Adobe Acrobat) format.
- Use SI units (with English units following in parenthesis, if desired).
- List references numerically at the end of the abstract, and use numbers in the text, enclosed within brackets.
- If using the ASCII text of HTML format, please include tables or figures in GIF or JPEG format. Also, please upload your original source document for use in the printed program, if available.

PLEASE NOTE:

- The title of your abstract will be used as the title of your presentation in the preview program.
- At least one author of accepted papers will be expected to register for the conference. There are no funds available in the conference budget to support travel fees or complimentary conference registration.

ABSTRACT LENGTH

Abstract should be within 450 words with name, affiliation, country (nationality) and email information. One figure and/or table maximum.

CONTENT

The contents of the abstract must include the objectives of the study/investigation and the methodology used. It should also briefly describe the main findings and their potential applications. Sufficient information should be included for an independent reviewer to determine its suitability for the conference.

AUTHOR'S ORGANIZATIONAL APPROVAL

All internal reviews and organization approvals must be completed prior to submittal of the final paper. It is the responsibility of the author to protect proprietary information.

SUBMIT A SUMMARY

ans.org/meetings

TRANSACTIONS COORDINATOR

Ellen Leitschuh
708-579-8253
708-579-8313 Fax
eleitschuh@ans.org

INFORMATION SERVICES

Joe Koblich, Director
708-579-8237
708-579-8274 Fax



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PAPER PREPARATION FOR PUBLICATION IN CONFERENCE PROCEEDINGS

- Accepted papers will be included in the Flash Drive Proceedings that will be distributed at the beginning of the conference.
- Authors of accepted papers will be allowed 10 pages for publication at no charge. Authors who exceed the 10 page limit will be billed a per-page charge of \$100 per page.
- All type and illustrations should appear within designated margins—dimensions are 7 in. (178 mm) by 9 in. (229 mm). We recommend 10-point type with 12 points of leading (spacing between lines). Use Times Roman typeface or an equivalent.
- Indent each paragraph 6.3mm (use tab; do not use the space bar to indent). Single-space your text in two-column format. Your equations, figures, and tables do not need to comply with the two-column format. In other words, equations, figures, and tables may span the columns.
- Changes to accepted papers must be limited to revisions or changes requested by the Technical Program Committee.

GLOBAL 2019

Technical Program Chair: Jack Law, INL

Assistant Program Chairs: Jeff Brault, Retired
Jared Johnson, ORNL

Tracks and Sessions

1) Fuel Cycle Strategies and Approaches

- a) Trends in Nuclear Energy Fuel Cycles
- b) Fuel Cycle Scenario Analysis
- c) Fuel Cycle Modeling and Simulation
- d) Sustainability of Nuclear Energy Systems

2) Current Fuel Cycle Technologies

- a) Uranium Resources
- b) Reactor Life Extension
- c) Spent Fuel Management/Waste Treatment
- d) Technology Advances in Reprocessing and Vitrification Technologies
- e) Spent Fuel Storage and/or Disposal
- f) Transportation

3) Advanced Reactors (excluding MSR) (RPD co-sponsor)

- a) Advanced Reactors
- b) Small-Modular Reactors
- c) Reactors for Non-Electric Applications

4) Molten Salt Reactors (RPD co-sponsor)

- a) MSR Design
- b) MSR Chemistry Advances
- c) MSR Safety and Regulation
- d) Modeling and Simulation
- e) MSR Fuel Qualification
- f) MSR Back End Fuel Strategy

5) Advanced Fuel Cycles

- a) Advanced Fuels/Targets/Materials
- b) Advanced Partitioning Technologies
- c) Waste Management
- d) Modeling and Simulation of Advanced Technologies

6) Advanced Safeguards (NNPD co-sponsor)

- a) Advanced Safeguards
- b) Nonproliferation Policy
- c) Proliferation Risk Reduction

7) International Collaboration and Public Acceptance

- a) International Collaboration and Research
- b) Social Issues, Public Acceptance
- c) Human Capital Needs and Development

TOPFUEL 2019

Technical Program Chairs: Stephen Mazurkiewicz, Framatome Inc.
Randal Dunavant, Southern Nuclear

Tracks and Sessions

1) Fuel Performance Reliability, Operations, and Maintenance Experience

- a) Fuel Operating Experience and Performance (including reliability, degradation and failures, handling incidents, water side corrosion and hydriding, stress corrosion cracking, post-irradiation examinations, pool side examinations, radiation effects, etc.)
- b) High Burn-Up Fuels
- c) Water Chemistry and Corrosion Counter-Measures
- d) Fuel Assembly Distortion
- e) Mixed-Core Operation
- f) Power Maneuver Flexibility
- g) Re-Use after Transportation/Storage

2) Advances in Fuel Technologies

- a) International Development Roadmaps and Status
- b) Advanced Fuel Designs
- c) Cladding and Structural Alloys Development
- d) Fuel Rod, Fuel Cladding and Component Materials Behaviors
- e) Definition of Evaluation Metrics
- f) Qualification and Licensing
- g) Deployment Scenarios (from manufacturing and in-reactor normal operation to severe accidents and back-end)

3) Transient and Off-Normal Fuel Behavior

- a) Transient Fuel Behavior and Criteria (RIA, LOCA, ATWS, PCI/SCC, PCMI)
- b) Fuel Safety Related Issues
- c) Fuel Fragmentation, Relocation and Dispersal
- d) Transient Fission Gas Release
- e) Cladding Burst/Ballooning Mechanisms
- f) Fuel Behavior Under Extended Loss of Cooling, Re-Criticality
- g) Small and Large Scale Fuel Testing Facilities

4) Used Fuel Storage, Transportation and Reuse/Recovery

- a) Fuel Characteristics and Performance for Transportation and Interim/Long-Term Storage
- b) Criticality
- c) Fuel Behavior in Dry Containers, Wet Storage Ponds and During Transportation
- d) Aging Issues
- e) R&D Activities

5) Fuel Modeling and Analysis

- a) Development, Verification and Validation of Fuel Modeling Codes at Steady State and in Transient
- b) Multi-Scale Modeling
- c) Multi-Physics Coupling
- d) Fuel Behavior Modeling During Operation and Under Back-End Conditions
- e) Water Chemistry Modeling
- f) Statistical Uncertainty Analysis
- g) Design and Analysis Methods