



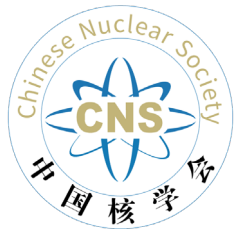
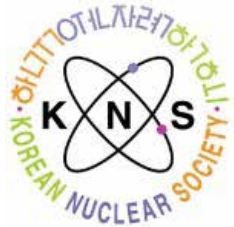
# TopFuel 2022

October 9–13, 2022 | Raleigh, NC | Renaissance Raleigh North Hills Hotel

ORGANIZED BY ANS  
IN COOPERATION AND  
THE SUPPORT OF:



EUROPEAN NUCLEAR SOCIETY



## CALL FOR PAPERS

### EXECUTIVE CHAIRS

#### General Chair

Rita Baranwal (Westinghouse)

#### Program Cochairs

Colby Jensen (INL)

Ken Geelhood (PNNL)

### ABSTRACTS DEADLINE: MARCH 4, 2022

<b>MARCH</b>		→	SUBMISSION OF ABSTRACTS: <b>March 4, 2022</b>
<b>APRIL</b>		→	AUTHOR NOTIFICATION OF ACCEPTANCE (ABSTRACTS): <b>April 1, 2022</b>
<b>JUNE</b>		→	FULL PAPERS DUE: <b>June 3, 2022</b>
<b>JULY</b>		→	AUTHOR NOTIFICATION OF ACCEPTANCE (FULL PAPERS): <b>July 1, 2022</b>
<b>JULY</b>		→	FINAL FULL PAPERS (CAMERA READY) DUE: <b>July 15, 2022</b>

### MEETING DESCRIPTION

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 the EPSR system at <https://epsr.ans.org/meeting/?m=385>. Submission review will provide recommendation to authors for either oral or poster presentation. All submissions must be in English.

### SUBMISSION OF ABSTRACT

1. Abstracts must be submitted electronically in PDF format.
2. Use SI units (with English units following in parenthesis, if desired).
3. List references numerically at the end of the abstract, and use numbers in the text, enclosed within brackets.

### 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 AN ABSTRACT

<https://epsr.ans.org/meeting/?m=385>

### PROGRAM SPECIALIST

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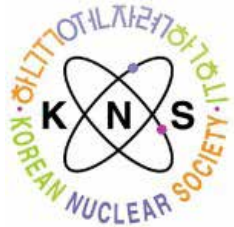
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## PAPER PREPARATION FOR PUBLICATION IN CONFERENCE PROCEEDINGS

- 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.

The TopFuel 2022 Program Committee is calling for papers in the following themes and will notify authors if their paper is selected for oral presentation or poster presentation:

- Track 1. Operation and experience – Fuel operating experience and performance (reliability/leakers, fuel assembly/component distortion, degradation and failures, handling issues, water-side corrosion and hydriding, stress corrosion cracking, poolside examination and hot cell PIE); fuel assembly repair; failed fuel monitoring, water chemistry and corrosion/crud/dose counter-measures; mixed core operation; reload variability; flexible operation (power modulation or load follow), extended operating domain; fuel supply strategy; fluence reduction to reactor components; end of reactor life (management of final cycles).
- Track 2. Advances in designs, materials, and manufacturing – Fuel Assembly design innovations; processing and manufacturing; cladding and structural materials development; mechanical and corrosion behavior; fuel design for higher than 5% enrichment, high burnup, fluence reduction and for disposal; qualification and licensing.
- Track 3. Evolutionary and innovative advanced technology fuels (ATF) – Advanced fuel and control rod designs, fuel pellet, cladding and component materials behavior; in-pile experience; irradiation testing and PIE; qualification and licensing issues; deployment scenarios; life-cycle implementation from manufacturing to reactor operation and back-end.
- Track 4. Modeling, analysis, and methods – Development, verification, validation, and uncertainty quantification of fuel performance modelling codes; multiscale modelling (including ab initio); multi-physics; water chemistry and crud modelling; experimental data and applicability; transposition to in-reactor and back-end conditions; statistical uncertainty analysis; design and analytical methods; big data applications, modeling of ATF.
- Track 5. Transient Fuel Behavior and safety related issues – Transient fuel behavior (RIA, LOCA, ATWS, PCI/SCC, PCMI, DNB/dryout) safety and design criteria (including ATF), safety analysis and licensing; fuel safety related issues (e.g. fuel fragmentation, relocation and dispersal; long term coolability; re-criticality; transient fission gas release; cladding burst/ballooning mechanisms; fuel behavior under extended loss of cooling); small and large scale fuel testing facilities.
- Track 6. Used fuel storage, transportation, and re-use – Closed fuel cycles (re-use); strategies; re-use after transportation/storage; interim storage, dry storage, wet storage, long term storage strategies (incl. ATF); handling and transportation of damaged, high BU and non-standard fuels (incl. ATF); handling and treatment of leaking fuel; R&D activities; aging issues; criteria and regulation; long term fuel database management.