



TopFuel 2021 – Call for Papers

TopFuel 2021 will take place from 6 – 10 June 2021 in Santander, Spain

TopFuel's primary objective is to bring together leading specialists in the field from around the world to analyse advances in nuclear fuel management technology and to use the findings of the latest cutting-edge research to help manufacture and safely operate the high performance nuclear fuels of today and tomorrow.

NEW! All authors have the possibility to opt for remote presentations and participation at the conference.

The **TopFuel 2021** Programme Committee is calling for both oral and poster presentations in the following themes:

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 behaviour; irradiation experience in MTR; 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 (eATF)

Advanced fuel and control rod designs, fuel pellet, cladding and component materials behaviour; in-pile experience; qualification and licensing issues; deployment scenarios; life-cycle implementation from manufacturing to reactor operation and back-end.

Track 4. Modelling, analysis and methods

Development, verification, validation and uncertainty quantification (VVUQ) 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, modelling of eATF.

Track 5. Transient Fuel Behaviour and safety related issues

Transient fuel behaviour (RIA, LOCA, ATWS, PCI/SCC, PCMI, ...), safety and design criteria (including eATF, DEC conditions), 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 behaviour 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. eATF); handling and transportation of damaged, high BU and non-standard fuels (incl. eATF); handling and treatment of leaking fuel; R&D activities; ageing issues; criteria and regulation; long term fuel database management.

Authors should submit their abstract text (around 400 words) in English through the Abstract Submission System on www.euronuclear.org/topfuel2021

by:

20 December 2020

Notification of authors: 1st February 2021

Deadline for draft paper submission: 2 April 2021

Author notification of paper acceptance: 15 May 2021

Final deadline for full paper submission: 1 June 2021

Email ALL correspondence to info@euronuclear.org

Your accepted full paper will be included in the Conference Proceedings that will be posted on the ENS website: www.euronuclear.org.

Conference Secretariat

European Nuclear Society

56 Avenue des Arts - 1000 Brussels, Belgium

Tel. +32 2 505 30 54 - info@euronuclear.org

www.euronuclear.org/topfuel2021