



Call for Technical and Student Papers

The Canadian Nuclear Society will host its 40th Annual Conference in parallel with the 45th Annual CNS/CNA Student Conference from June 6 to 9, 2021. This conference provides a forum for communicating progress, achievements and new ideas across a broad range of nuclear technology areas. Topics of interest are listed on the following page. Out of an abundance of caution in view of the COVID-19 situation, the conference will be held virtually. Visit the Conference Website at <http://cns-annual-conference.org/>

The conference will feature:

- Plenary sessions with invited speakers to address significant industry developments
- An embedded symposium on Small Modular Reactors (SMRs) addressing all aspects of this emerging technology
- Technical sessions with subject-matter experts from utilities, suppliers, the regulator, academia, federal laboratories and agencies to present the latest advancements in nuclear science and technology
- Exhibits with industrial leaders showcasing their latest nuclear products and technology
- A Student Conference facilitating interaction between experts and the future generation of nuclear scientists, engineers and specialists
- Social (virtual) features that facilitate discussions and networking on subjects of common interests

Technical Program Guidelines

- Papers must present original material or a review of a significant area.
- The submission process is as follows:
 1. Submit abstract (maximum of 200 words demonstrating the essence of the work which will be presented, and must include paper title, all authors and their affiliations)
 2. Abstract will be reviewed
 3. Upon acceptance, submit full paper (maximum of 12 pages, using the conference paper template found on the conference website: <http://cns-annual-conference.org/>)
 4. Full paper will be peer-reviewed
 5. Upon acceptance, submit final paper (may require revision based on peer review process) for inclusion in the conference proceedings
 6. 15-minute presentation during conference
- By submitting a paper, you agree to it being presented at the Conference and that the paper and the presentation material may be published in the Conference Proceedings.
- See the conference website for the paper template and submission link: <http://cns-annual-conference.org/>
- At least one of the authors must register for the Conference by May 1, 2021 for the paper to be included in the Conference Program



Technical Program Submission Deadlines

- Abstract submission: **January 22, 2021**
- Full paper submitted for review: **February 28, 2021**
- Final paper submitted for the conference proceedings: **April 9, 2021**
- Slide deck submitted for presentation at the conference: **May 7, 2021**

Technical Program General Inquiries

Paul Spekkens, Technical Program Chair

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Student Program Guidelines

- Papers must present original material or a review of a significant area.
- The submission process is as follows:
 1. Submit a short paper (maximum of 5 pages, using the student paper template found on the conference website: <http://cns-annual-conference.org>)
 2. Paper will be peer-reviewed
 3. Upon acceptance, submit final paper (may require revision based on peer review process) for inclusion in the conference proceedings
 4. Poster presentation during conference
- By submitting a paper, you agree to it being presented at the Conference and that the paper and the presentation material may be published in the Conference Proceedings.
- See the conference website for the student paper template and submission link: <http://cns-annual-conference.org>
- At least one of the authors must register for the Conference by May 1, 2021 for the paper to be included in the Conference Program

Student Program Submission Deadlines

- Short paper submitted for review: **February 28, 2021**
- Final paper submitted for the conference proceedings: **April 9, 2021**
- Poster submitted for presentation at the conference: **May 7, 2021**

Student Program General Inquiries

Student Program Chair – TBD (see conference website for updates)



Technical Topics of Interest

SMALL MODULAR REACTORS

Deployment opportunities, design, licensing and deployment challenges; SMR concepts and designs; on-grid and off-grid applications in mining and remote locations.

NEW BUILD AND LIFE EXTENSION

New build programs; international collaborations; regulatory policy and risk assessment; life extension and license renewal; design and construction; new-site licensing; advanced systems and components; passive safety.

ENERGY POLICY AND GLOBAL CONSENSUS

Policy development; international and regional cooperation; energy mix; safeguards; sustainability; climate change; addressing public acceptance; education; communications; outreach.

COMPETITIVE CHALLENGES AND COST REDUCTION

Design and construction; manufacturing and modularity; economics and financing; supply chain assurance; market and competitive challenges.

OPERATIONS AND AGING MANAGEMENT

Operating experience; maintenance; operational risk assessment; outage management; fuel and equipment performance; equipment reliability enhancement; on-line condition monitoring; obsolescence; component replacement; supply chain.

ENHANCING SAFETY & SECURITY

Severe accidents; accident management and analysis; emergency planning; plant security; safety culture; stress-testing; criticality safety analysis; probabilistic risk assessment; regulatory perspective; nuclear security; non-proliferation

ENVIRONMENTAL PROTECTION & WASTE MANAGEMENT

Designing for environmental protection; assessment of environmental effects; decommissioning and environmental remediation; waste stream management and reduction; progress in repository development; interim used fuel storage strategies; waste treatment, packaging and transportation.

NEW TECHNOLOGY AND RESEARCH & DEVELOPMENT

Advanced reactor physics, radiation physics; thermal hydraulics; fusion; hydrogen production; materials science for new and existing designs; efficiency enhancements; space, mining and other novel applications; new nuclear codes and standards.

FUEL CYCLES

Uranium and thorium mining, milling, refining, conversion and enrichment; uranium and thorium fuel manufacturing; fault-tolerant fuel designs; open and closed fuel cycles; proliferation-resistant fuels.

MEDICAL & BIOLOGICAL BENEFITS

Medical and biological systems; treatments and protocols; new isotope manufacture; novel accelerators and target development; supply assurance; handling waste streams; economics; international trends; isotope production and use; agricultural applications.