



Nuclear Energy's Value
Aligned with community expectations

39th Annual CNS Conference & 43rd Annual CNS/CNA Student Conference

2019 CNS Annual Conference | Call for Papers

The Canadian Nuclear Society (CNS) will host its 39th Annual Conference at the Westin Hotel in Ottawa, Ontario, Canada from June 23 to 26, 2019. To be successful, any project, initiative or on-going operation must deliver what the Community expects with respect to environmental impact, public consultation, economics and reliability. This year's conference will explore these expectations and will show Nuclear Energy's Value – aligned with community expectations.

The CNS 39th Annual Conference will feature:

- Plenary sessions with invited speakers to address such topics as large scale refurbishment projects, options for future new-build, etc;
- 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 with student posters;
- Social events (such as opening reception, lunches, conference banquet, wine-&-cheese reception, coffee breaks and conference banquet) that facilitate discussions and networking on subjects of common interests.

The 43rd Annual CNS/CNA Student Conference will be held in parallel at the same venue, which facilitates interaction between experts and the future generation of nuclear scientists, engineers, and specialists. The Student Conference will feature a poster session, at which university students will showcase their latest research findings and advancements. A Call for Students' Extended Abstracts will be issued separately.

Important Dates:

Abstract submission: **January 31, 2019**

Full paper submitted for review: **February 28, 2019**

Final paper submission: **April 15, 2019**

Submission Guidelines:

- Papers must present original material or state-of-the-art review of a significant areas.
- Abstract should be a maximum of 150 words in length.
- Full papers should be no longer than 12 pages.
- The required format of submission is electronic (Word or PDF).
- By submitting a paper, you agree to it being published in the Conference Proceedings.
- Templates for abstracts & full papers are available on the Conference website: www.cns-annual-conference.org
- Submission should be made via: <http://www.softconf.com/h/CNS2019Technical>
- At least one of the authors must register for the Conference by the early-bird registration date (**May 1, 2019**) for the paper to be included in the Conference Proceedings.

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CNS
2019
SNC

OTTAWA

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2019 CNS Annual Conference | Technical Topics

NEW BUILD & 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

NEW TECHNOLOGY, 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

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

OPERATIONS & 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

FACILITATING ENERGY POLICY & GLOBAL CONSENSUS

Policy development; International and regional cooperation; Energy mix; Safeguards; Sustainability; Climate change; Addressing public acceptance; Education; Communications; Outreach

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

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

COMPETITIVE CHALLENGES & COST REDUCTION

Design and construction; Manufacturing and modularity; Economics and financing; Supply chain assurance; Market and competitive challenges

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