

List of CNS 2023 Awards



1. The first award is for the Harold A. Smith Outstanding Contribution Award Category

The purpose of this award category is to recognize Canadian-based individuals, organizations or parts of organizations that have made significant contributions in any field related to the beneficial uses of nuclear energy. These contributions may be either technical or non-technical.

This award category was established in 1989 by the Canadian Nuclear Association. It was named in honour of Harold A. Smith of Ontario Hydro, who was one of the key players in the establishment of the Canadian nuclear power program. In 2023, we have 1 recipient for the Outstanding Contribution Award Category. That recipient is **Kamal Verma.**

Kamal's career spans his early years as a designer at Canatom, then at the Point Lepreau generating station to work on commissioning and then on engineering support when the station went into operation. After many great years in New Brunswick, Kamal joined AECL and was stationed at Qinshan units 1 and 2 as Technical Superintendent of Phase A and C Commissioning. After China, Kamal went to Romania and was the SNC technical commissioning manager for Cernavoda unit 2. After unit 2 start-up Kamal stayed on as Resident Senior Technical Advisor supporting the operation of both units 1 and 2. After playing an important role as a key member of the SNN team operating Cernavoda units 1 and 2, Kamal returned to New Brunswick to be SNC resident technical engineer at Point Lepreau. In August of 2015, Kamal returned to Ontario where he was promoted to Vice President, CANDU 6 fleet engineering, where he played a key role in establishing the C6 fleet and supporting on-going operations and preparing for upcoming refurbishment life extension projects. Kamal later joined Laurentis Energy Partners and is currently the Director of Engineering and Chief Engineer of Canadian Nuclear Partners. In 2007, Kamal was nominated for the AECL Distinguished Merit Award for Excellence in Leadership and Achievement during commissioning of Cernavoda NPP Unit 2. Kamal has also been a member of a number of key industry committees and through his direct contribution over the years and that of mentoring technical staff, Kamal has made an outstanding contribution to the safe and reliable operations of the CANDU 6 reactor in Canada and around the world. Kamal was President of the Pacific Nuclear Council from 2016 to 2018. He is a strong supporter of the Canadian Nuclear Society. He was

President of the CNS in 2021/2022 and is an active member of the Sheridan Park branch. He has supported a number of CNS conference organizing committees and is a regular attendee at CNS and other industry conferences and has authored a number of papers.

2. The next 3 awards are in the area of very important area of Education and Communication.



This award category recognizes the recipients for “significant efforts in improving the understanding of nuclear science and technology among educators, students and the public”. The *Education & Communication Award* was established by the Canadian Nuclear Society in 1997.

In 2023 we have three recipients.

Larkin Mosscrop is a Program Manager for S&T Business Development at Canadian Nuclear Laboratories (CNL). She is an incredibly capable, organized and hardworking contributor to CNL’s Business Management Team, but on top of her hard work in her 9-5 role, she also makes time to be the Lead Presenter and Nuclear Educator for CNL’s Education Outreach Program. CNL’s Education Outreach Program was founded to inform schools and interest groups in the Ottawa Valley about CNL’s operations as Canada’s premier nuclear science and technology organization, and educate young minds about the basics of nuclear science. In large part due to Larkin’s tireless efforts, the Education Outreach Program at CNL has grown to include presentations for universities, colleges, four different school boards, and various professional organizations, not only in the Ottawa Valley, but across Canada and the United States. Larkin has participated in hundreds of virtual and in-person presentations to teach students about nuclear science, energy and other nuclear-based S&T projects. She has put together dozens of presentations with age groups ranging from JK-12, university-level and beyond. She has also put together interactive displays, experiments, and games to help teach nuclear topics in a fun, engaging way. Over the past 8 months, Larkin has helped facilitate training sessions for the next generation of Nuclear Science Educators so our Education Outreach Program can continue to grow and meet demand. She has been teaching her presentation materials to five up-and-coming CNL Nuclear Science Educators. With her leadership in nuclear education, CNL’s program will be able to further grow across Canada and around the world.

Larkin has been with CNL every step of the way as a primary presenter for all our exciting new presentation opportunities with NAYGN Continental, Exploring by the Seat of Your Pants, the University of Calgary, Women in Nuclear’s EmPOWERed Women seminars, and more. However, Larkin is not only an incredible Nuclear Science Educator. Larkin has made significant contributions to external communications for the nuclear industry at large.

Larkin continues to proactively reach out to new organizations and establish partnerships to better the nuclear industry's outreach efforts. Larkin Mossdrop has demonstrated significant efforts in improving the understanding of nuclear science and technology among educators, students and the public and is subsequently the ideal recipient for the CNS Education and Communication Award.



3. In September 2021, Mackenzie Tigwell became McMaster's coordinator for Let's Talk Science, an award-winning Canadian charity that provides engaging, evidence-based STEM programs to teachers and students in K-12 schools at no cost. In this role, Mackenzie organized, hosted, and presented a "Let's Talk Nuclear" event that introduced hundreds of Canadian high schoolers to the basics of nuclear science and to the range of career paths that are available in the nuclear sector. Mackenzie was a key member of the working group that enabled McMaster University's first ever participation in Nuclear Science Week (NSW) in 2021. With her colleagues, she helped to organize a multi-disciplinary Graduate Research Symposium for students researching nuclear related topics at McMaster (engineering physics, medical physics, nuclear safety, radiation biology, radiopharmaceuticals), designed at-home activities for families, and collaborated with the Canadian Nuclear Association on a series of social media posts. For NSW 2022, Mackenzie worked with the local chapter of NAYGN to create a nuclear-themed movie night open to students in all undergraduate programs at McMaster. By inviting a radiation safety specialist to hold an interactive Q&A session after the screening, she helped to demystify nuclear energy for the audience. Mackenzie is also the author of two short books: "A Guide to Radiation for the Everyday Scientist" (2021), which introduces non-scientists ages 12+ to the basics of nuclear energy and nuclear science; and "The ABCs of Nuclear Science" (2022), an alphabet book for young children. Both books have been widely praised by members of the nuclear community and on-line reviewers, and are now staples of MacMaster gift bags. Mackenzie is an effective and creative communicator with a talent for transforming complex ideas into simple language. She has made significant contributions to informing the public about the nuclear sector, and we are all confident that she will continue to serve as an advocate for nuclear as she continues her career



4. As the organizer of many CNS courses over the years, **Dr. Victor G. Snell** has delivered lectures on reactor safety and also special banquet talks on plant safety at many CNS courses, in particular the CNS CANDU Technology and Safety Course, which has always been very well attended by people in all manner of organizations in the Canadian nuclear industry. Victor's presentations were always insightful and very well liked by the course registrants, as evidenced by multiple feedback to the CNS organizers. Victor made a huge contribution as well on the academic side. As Program Director for the UNENE M.Eng. and Diploma Programs, he ensured the on-going excellence of UNENE courses, which are delivered by 5 universities that include the UNENE Program in their curriculum. In addition, as Adjunct Professor at both McMaster University and Ontario Tech, Victor delivered the UNENE Safety course himself for more than a decade. In these courses, Victor made impactful contributions to students (most of whom pursuing a career in the Canadian nuclear industry) on the crucial importance on ensuring strong safety at all levels. His courses always included projects which gave students practical experience in analyzing safety.

His keystone activities have always been accompanied by Victor's readiness to speak with students and young nuclear engineers and scientists, and to provide advice and guidance to colleagues in our nuclear community. I enclose support letters that provide a demonstration of the appreciation for his work. Victor has made a significant mark in our nuclear education field, not least through the many younger nuclear professionals who have been inspired by his thoughtful and insightful teaching.

5. The next presentation is for the **FELLOWS OF THE CANADIAN NUCLEAR SOCIETY**



CNS members who are appointed "*Fellows of the Canadian Nuclear Society*" belong to a membership category established by the Society in 1993 to denote extensive contributions to the Society and meritorious service to the nuclear field in Canada. In the tradition of honorary membership categories of learned societies, CNS Fellows are

entitled to add the letters "F.C.N.S." to abbreviations denoting degrees and professional certifications following their name. **This year, we have one individual being appointed as a Fellow of the Canadian Nuclear Society, Dan Gammage.**

Dan's contributions to the CNS are extensive and meaningful. • He has been a Member of the CNS Council since 2012.

1 st/2nd Vice President - 2015-2017 (Executive Chair of 2017 CNS Annual Conference, Niagara Falls ON) o

President – 2017-2018

Treasurer – 2019-2021 (while Treasurer, Dan was instrumental in implementing an improved financial and budget system)

Chaired the CNS' Design & Materials Division 2012-2017 and remains active in assisting and mentoring subsequent Chairs of the Materials, Chemistry & Fitness-for-Service (is also the CoChair) and the Nuclear Operations and Maintenance Divisions.

Member of Organizing Committees for over 14 major nuclear industry conferences and events and Chair of several: • Executive Chair of INCC 2015 – CNS International Nuclear Components Conference, • Nuclear Plant Chemistry 2010, • Multiple Steam Generator Conferences, • CANDU Maintenance Conferences, CNS Annual Conferences, and various EPRI sponsored events.

• As Council Member-at-Large, Dan is the consummate professional and can be counted on to come to meetings prepared and offer penetrating analysis and sage advice. He also serves on various committees. He's tireless efforts to improve the CNS are well recognized.

6. Next we have the George C. Lawrence Nuclear Safety Award.



This award is presented to an individual or team to recognize major contributions to the philosophy, science, and application of safety principles for nuclear reactors. This year's recipient is **Alexander Trifanov**.

Alexander Trifanov has been instrumental in promoting safety and excellence in the power generation and nuclear industry for thirty years. Alexander is a Professional Engineer and a Master of Science in Industrial Automation and Control. He started his career in operation of a conventional power plant in 1992 and then continued his career in several nuclear regulatory bodies and nuclear service providers. Alexander is presently a Principal Engineer/Scientist in Kinectrics' Nuclear Safety and Licensing division and is a recognized leader and consultant on all aspects of Probabilistic Safety Assessment and risk-informed applications. Throughout his carrier, Alexander has demonstrated consistent leadership in quality of work, implementation of advanced methods for improving nuclear safety, cost-effective development of complex PSA models and risk-informed solutions.

In 1995, Alexander joined the State Scientific and Technical Centre of Nuclear and Radiation Safety (a subsidiary of the Ukrainian nuclear regulator) as a Research Engineer in the Nuclear Power Plants Safety Assessment Department

Between 1996 and 1998, Alexander worked in a Specialized Centre of Power Plants Personnel Training. As a Senior Engineer, he participated in the development of a systematic training program for the Ministry of Energy of Ukraine. Alexander also planned and delivered training courses for power plants personnel and participated in development of power plant simulators. In 1998, Alexander co-founded the Laboratory of Safety Analysis of Nuclear Installations and Potentially Hazardous Technologies.

Alexander is a significant contributor to the development of new methodologies and assessments for Small Modular Reactors and non-reactor facilities. Significant differences of SMRs and non-reactor facilities compared to the traditional large power reactors, as well as the iterative nature of the analysis during the design stage when the plant documentation is still in the development, require innovative solutions and efficient cooperation of multidisciplinary teams.

Alexander has always been a proponent of risk-informed and cost-effective improvements in power plants design and operation. He has supported a number of design assist analyzes and identification of efficient risk reduction solutions for NPPs.

Alexander is continuing his leadership work in the on-going projects supporting both the existing NPPs and new nuclear facilities.