

Donald Metzger
AtkinsRealis



Dr. Donald R. Metzger completed his Ph.D. in Mechanical Engineering at the University of Waterloo in 1988 and immediately began working in the nuclear industry at the Ontario Hydro Research Division. There, he developed and applied numerical models for the degradation of nuclear materials and contributed a major finite element capability to assess hydride blisters and the Delayed Hydride Cracking mechanism in pressure tubes. This achievement was recognized with the W.P. Dobson Award for outstanding contribution to the understanding and predicting CANDU fuel channel behavior in 1991. Other significant projects included impact analysis of radioactive waste transportation packages and analysis of roller expanded joints used in CANDU reactors.

In 1998 Dr. Metzger took a faculty position in the Mechanical Engineering Department at McMaster University where he taught courses in Dynamics, and Advanced Finite Element Analysis. His research focused on nonlinear numerical methods for solid mechanics from both the material science and structural dynamics perspective. These topics are relevant for analyzing reactor materials and components, and many of his graduate students now work in the Canadian nuclear industry.

Dr. Metzger joined Atomic Energy of Canada Ltd. (AECL) in 2004 and his position continues as a Principal Engineer at AtkinsRealis. He has worked on numerous major projects on fuel channel assessment and reactor refurbishment. He led the development and implementation of a patented leak testing method for calandria tube rolled joints and for this major accomplishment, he and his team received the D.F. Torgerson Discovery Award (from Atomic Energy of Canada, 2008). This leak test method has been used in all subsequent reactor refurbishment projects. His work on annulus spacer testing and analysis has contributed establishing methods that are now applied for evaluating spacer integrity. He also developed a novel torsional fatigue test system which in 2021 was successfully applied to irradiated ex-service spacers to produce data used to determine fatigue properties. Recent work on hydrogen diffusion has advanced analytical capabilities by combining hydrogen isotope effects with temperature and stress gradient effects. This achievement permits more detailed evaluations to support assessment of hydrogen ingress and diffusion in pressure tube rolled joints.

Throughout his career, Dr. Metzger has maintained active participation in the ASME Pressure Vessels and Piping Division through contributing technical papers, through developing and chairing technical sessions, through service as a Technical Committee Chair (Computer Technology, 2001-2005), and as a representative on other subcommittees. He has also received awards for outstanding papers in the ASME PVP conference in 1993 and 1999.

Education & Communications Award

Ulf Stahmer
Nuclear Waste Management



Shortly after arriving at the Nuclear Waste Management Organization (NWMO), Ulf Stahmer, a Senior Transportation Engineer, engaged with an Indigenous community. He was asked, ‘How dangerous is used nuclear fuel?’ Feeling that his response didn’t land with his audience, he wondered how this seemingly simple yet surprisingly complex question could be answered more effectively. This question sparked his desire to translate complex technical information into concepts readily relatable to the layperson.

By listening to the public’s questions and concerns, Ulf realized that some of the typically unfamiliar units used in nuclear science could be expressed in units of time, thus allowing complex concepts to be conveyed in relatable ways. This led him to develop [the flight-time equivalent dose](#), a simple method that makes radiological dose relatable. Similarly, by calculating the time required to receive a given dose at a given distance, he was able to illustrate in how the radiation hazard posed by used nuclear fuel changes with fuel age. He also worked on making the vast and minimal numbers often used by the nuclear industry resonate with the public. For example, the electricity generated by nine uranium fuel pellets, the size of three AA batteries, will power an average home for one year, and the cost to store those pellets forever in a deep geological repository is about \$40.

Over his 16 years at the NWMO, Ulf has led hundreds of engagements across Canada on diverse topics, including transportation, radiation, used fuel, and repository design. He has spoken with the public, Indigenous peoples, first responders, students, government officials, and academia. His ability to connect with people from all walks of life with humility provides them with a relatable view of the nuclear industry. Ulf has embraced the information and teachings he has learned along his journey and is passionate about sharing them.

Education & Communications Award

Matthew Mairinger's OPG



Matthew Mairinger is a young engineer who has impacted the nuclear industry through advocacy. He has served in the NAYGN Durham chapter leadership position from 2015-2019 before being elected to the Canadian Operating Officer role from 2018-2022. The following year, his peers elected him to the NAYGN Presidency, a position he continues to hold today

In addition to his technical contributions to the industry, he is a gifted communicator and has authored articles and presented at international conferences. His passion for nuclear and sustainable energy solutions has led him to spearhead several initiatives to enhance public understanding and acceptance of nuclear power. His commitment to education and outreach is evident through his active involvement in programs such as NAYGN and his mentoring role for aspiring engineers.

Matthew holds a P. Eng. and PMP designation. He received his Bachelor of Engineering in Nuclear Engineering and Nuclear Technology graduate diploma from the University of Ontario Institute of Technology. He is currently on a secondment with Laurentis Energy Partners as the manager of Business Development. He resides in Bowmanville, Ontario, and enjoys surfing, golf, and windsurfing.

Innovative Achievement Award

Andrew Toomey

CNL Team



Andrew Toomey is a Decommissioning Technologist at Canadian Nuclear Laboratories (CNL), primarily working at the Chalk River Laboratories site. He holds diplomas in Radio and Television Broadcasting from Durham College and Energy Systems Engineering Technology from Centennial College. After working at CNL as a co-op student throughout 2022, he began his full-time role in August 2023. Andrew is adept with various innovative technologies, including laser scanners, robots, indoor drones, and 3D printers, and manages most of the team's media production.

Over the past year, Andrew has led the development of digital visualization capabilities for decommissioning. He independently creates videos and other media to support data visualization and scanning projects. As a subject matter expert in content generation for the D&ER Innovations teams, Andrew developed a SharePoint news page to communicate advancements in Innovation at CNL. Staff across the organization frequently seek his expertise with the software platforms that support digital twin data of legacy buildings.

Innovative Achievement Award

**Jeff Fortin
CNL Team**



Jeffrey Fortin's career journey in the nuclear industry is a testament to his adaptability, problem-solving skills, and commitment to innovation. Beginning as a Nuclear Operator Trainee in 2011, he steadily progressed through various roles, eventually becoming an integral part of the Innovation Team.

In 2020, faced with the challenges posed by the pandemic, Jeff recognized the need for a solution to bring the field to remote workers. Taking the initiative, he delved into exploring options, eventually identifying a suitable solution that met IT and security requirements, despite the requirement that all data collection, post-processing, and hosting be conducted internally.

Undeterred by this challenge, Jeff dedicated himself to mastering the necessary skills and technologies. Over several months, he taught himself everything required to develop and enhance the virtual tour capability. By June 2022, he successfully established an infrastructure capable of hosting an on-premises web-based solution, enabling staff to access and explore virtual tours from anywhere they could access their work computer.

This innovative solution facilitated remote work and significantly improved safety by reducing the need for staff to enter hazardous areas physically. Through the virtual tour capability, remote workers gained access to detailed visual representations of facilities, allowing them to conduct inspections, assess conditions, and collaborate with onsite teams without exposure to potential risks.

In addition to his technical contributions, Jeff's role as a mentor and subject matter expert for 3D scanning underscores his commitment to knowledge sharing and fostering the growth of his colleagues. His proactive approach to staying abreast of emerging technologies further exemplifies his dedication to advancing decommissioning activities and ensuring his team's continued success.

Overall, Jeff's journey exemplifies the qualities of a forward-thinking and adaptable professional whose dedication to innovation and continuous improvement has significantly contributed to the nuclear industry.

Innovative Achievement Award

Kuwar Dalal

CNL Team



Kuwar Dalal is a seasoned professional with extensive expertise in Business Intelligence, Data Modelling and Analytics, Process Insights, and Data Visualization. He transforms raw data into meaningful insights by creating visually appealing and interactive dashboards, specializing in designing and developing dynamic Power BI dashboards, dataflows, and scorecards. Kuwar possesses a robust skill set in software business solutions, with a strong foundation in various programming languages and machine learning frameworks. He is adept at creating and maintaining data models, ensuring data accuracy, consistency, revision control, and optimal performance. His technical proficiency is complemented by a commitment to delivering high-quality solutions that exceed client expectations. Additionally, Kuwar conducts regular data analysis to identify trends, patterns, and opportunities for process improvement, gathers and documents requirements for reporting and analytics projects, authors process and architecture documents, and conducts end-user training sessions. His work has been instrumental in creating interactive dashboards and improving reporting for the innovation teams, as well as the execution and planning teams, in Decommissioning and Environmental Remediation at CNL.

Innovative Achievement Award

David Gaunt

CNL Team



David Gaunt, hailing from Kingston, Ontario, is a dedicated professional in nuclear decommissioning with a strong background in radiation safety, having studied at Algonquin College. With five years of experience as a radiation surveyor, David transitioned to a decommissioning technologist position at CNL in Chalk River, Ontario, where he made remarkable contributions. His expertise in developing volume estimation methods using point cloud data and creating Generative AI-based visualization tools for reactor segmentation has significantly advanced project planning and safety protocols.

David's proficiency as a pilot for the Elios 3 indoor inspection drone has been instrumental in mapping and inspecting decommissioned fuel rod bays and conducting high-risk inspections of hazardous environments like underground utility tunnels. Additionally, he successfully commissioned the Remediation Rex Robot quadruped, which has proven invaluable for environmental remediation tasks. David's innovative approach ensures high-resolution data collection while safeguarding personnel. His work exemplifies his commitment to excellence and leadership in digital transformation within the nuclear industry, driving safer, more efficient, and transparent decommissioning processes.

Innovative Achievement Award

**Michelle Le
OPG Team**



Michelle earned a Bachelor's degree in Medical Radiation Sciences from McMaster University in 2012 and a PhD in Radiation Biology from the same institution in 2017. Her doctoral research focused on the radiation-induced bystander effect on human keratinocyte cells exposed to low doses of tritium, including occupational levels.

Inspired by her studies and faculty mentorship, Michelle pursued a career in Health Physics, joining Ontario Power Generation (Pickering Nuclear) in 2017. At OPG, she has excelled as a Health Physicist and a First Line Manager in the Radiation Protection department. Michelle oversees various responsibilities, including ALARA dose planning, dose-reducing initiatives, radioactive work planning for varying hazard levels, radiography shot plan reviews, and Class 7 radioactive shipping.

Her dedication to providing top-tier radiation safety support is driven by the valued relationships she has built with her collaborators.

Health Physicist at OPG's Pickering Nuclear Generation Station

Innovative Achievement Award

Johnathon Hash

OPG Team



Johnathon Hash began his nuclear journey at San Onofre in 1988. Over the years, he performed Radiation Protection work for the commercial power industry, the Department of Energy (USA), and various decommissioning sites before arriving at Darlington Nuclear Station in 2000. Since then, he has held multiple roles within OPG, including positions in the Radiation Protection organizations at Pickering and Darlington and the Health Physics department for the fleet.

In 2015, Johnathon became the Senior Manager for the Darlington Refurbishment Project and transitioned to Pickering in 2022. He and his team are excited about the upcoming refurbishment at Pickering and the decommissioning work for the Pickering A site.

After attending a COG conference in 2023, Johnathon collaborated with Michelle and Kevin to evaluate this new technology for OPG. The team's interest and buy-in have been phenomenal, and they are very proud to receive this innovation achievement award.

Johnathon Hash – Senior Manager of Radiation Protection at OPG’s Pickering Nuclear Generation Station

Innovative Achievement Award

Jordan Anderson

OPG Team



Jordan Anderson earned a Bachelors in Biological Sciences at Ontario Tech University in 2011 and completed a Master's and PhD in Applied Bioscience at the same institution. Jordan's graduate research was in Aquatic Toxicology, focusing on the developmental impacts of pharmaceuticals on embryonic fish development.

Jordan's passion for learning and problem-solving led him to OPG in 2020 as an Innovation Lead in the OPG innovation development team (X-Lab). Here, he has been leading the Advanced Manufacturing focus area of Innovation. He has had the opportunity to build and integrate additive manufacturing into OPG's business. Leveraging this Technology to solve part obsolescence, model development for training, and custom tooling has been incredibly valuable to OPG. The additional manufacturing of custom tungsten shielding evidences this.

Jordan is motivated by problem-solving, and when the need for custom shielding came forward, he was incredibly excited to work on it. He and the rest of the team are very honoured to accept this award. This was a complete team effort and could not have been done without all of our contributions.

Jordan Anderson – Innovation Lead in Creative Intelligence and Innovation OPG

Innovative Achievement Award

Kevin Bellerose

OPG Team



Kevin Bellerose is a dedicated Radiation Protection Support Specialist at OPG's Pickering Nuclear Generation Station. Holding a diploma in Mechanical Techniques—Maintenance & Control from Durham College, Kevin has spent his career focused on ensuring safety and innovation in radiation protection.

In his current role, Kevin is instrumental in fostering an innovative culture within his department. He continually seeks improvements to protect workers from radiological hazards and enhance workforce efficiency.

Among his notable achievements, Kevin spearheaded the "OPG Streetview" project during his secondment to X-Lab in 2019, which is widely used for work planning today. As a First Nations person and a proud member of OPG's Indigenous Circle, Kevin is passionate about engaging with other indigenous people interested in innovation or careers in radiation protection and health physics.

Kevin's motivation stems from a deep passion for finding better and safer ways to complete tasks, ensuring his colleagues can work safely and efficiently. His managers have supported his innovative ideas, encouraging him to pursue his passion for safety and innovation. Looking ahead, Kevin aims to continue driving an innovation culture within his department and engage with indigenous youth, a cause close to his heart.

Kevin Bellerose – RP Support Specialist at OPG's Pickering Nuclear Generation Station

George C. Lawrence Award

Sugata Ganguli
Kinectrics



Sugata continues his nearly fifty-year career in the Canadian Nuclear Industry as the Senior Technical Director of Risk Management at Kinectrics. After completing his B.A.Sc. in Electrical Engineering from the University of Waterloo, Sugata started his career as a Junior Engineer in Ontario Hydro, Pickering NGS A, and soon after as a Technical Specialist in the Instrumentation and Control (I&C) Department of the Design & Development Division. In these early years, Sugata got a taste of Probabilistic Risk Assessment (PRA) as he supported this innovative approach by providing I&C and station support in developing the early PRA models. This role continued through 1993 when Ontario Hydro underwent a significant reorganization. For the next few years, Sugata returned to India as Manager, Corporate Planning, CESC Limited in Calcutta.

After a few years, Sugata returned to Canada and Ontario Hydro and resumed where he left off—initially working on the Safe Operating Envelope (SOE) project and returning full-time to PRA. When Ontario Hydro (now OPG) divested itself of the Nuclear Safety division, Sugata remained with OPG as a Smart Buyer for Risk and Reliability. In that role, Sugata was responsible for developing and maintaining PRA tools and methodologies, monitoring and accepting PRA projects performed by vendors, supporting the operating stations, and interfacing with the regulator on all PRA-related activities. The original focus was on internal events and establishing a robust and sound methodology for performing the assessments. In addition to the development of the PSAs themselves, Sugata was the main driver in pushing for the adoption of PSA within the utilities in developing PSA governance and guides to ensure consistent approaches were applied across Ontario Hydro Nuclear plants. All of the principles established in these early governance documents continue to be used today.

As the internal events PSAs matured, methodology development focused on closing a gap related to the other hazard PSAs (e.g., seismic, flood, fire, wind). Sugata was engaged with EPRI and knew the methodologies existed to address this gap south of the border. In 2008, Sugata founded the Kinectrics PSA team. One of the early hallmark achievements of this team was to partner with Erin Engineering (USA) to develop state-of-the-art PSA methodologies, followed by the PSAs themselves for these hazards. The methodologies developed early on by Sugata's team are now a key part of the Canadian PSA methodology and are included in various industry documents, including COG methodology reports and CSA standards. Between 2008 and 2024, Sugata grew the Kinectrics PSA Team to 30 staff. At present, Kinectrics is able to scope out, develop, and maintain full scope PSAs for a range of customers under Sugata's leadership.

John S. Hewitt Team Achievement Award

Kinectrics Medical Isotope Team

Awarded to the Kinectrics Medical Isotope Team in recognition of creating a Canadian supply of the key stable isotope, Ytterbium-176, reducing the industries dependence on supply from other countries.



Adrian Boangiu



Ahren Alfonso



Basim Al Shibli



Damian Belanger



Michael Daffern

John S. Hewitt Team Achievement Award

Kinectrics Medical Isotope Team



Ljubo Djordjic



Henryk Herman



Allan Jarvine



Joseph Nguyen



Ruth Klatt

John S. Hewitt Team Achievement Award

Kinectrics Medical Isotope Team



Jason Lee



Ojoon Kwon



Husain Mehdi



Paul Driedger



Zubeda Merchant

John S. Hewitt Team Achievement Award

Kinectrics Medical Isotope Team



Andrew Rizzetto



Nathan Goodfellow



Ruwan Wijesundera



Setu Gupta



Thierry Baeta

Honours & Award Press Release- 2024

John S. Hewitt Team Achievement Award

Kinectrics Medical Isotope Team



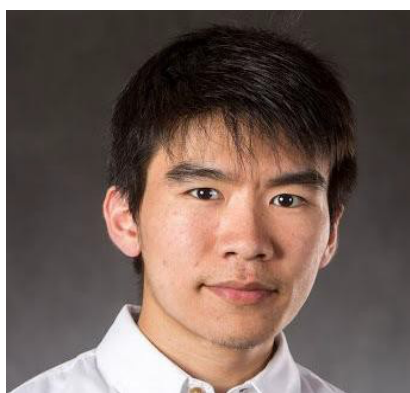
Travis Besanger



Manish Vashishta



Alexander Tom



Darren Wong



Emilija Ilikevska

Honours & Award Press Release- 2024

R. E. Jarvis Award

Adil Shaik

Queen's University



Adil Shaik is a PhD student in the Mechanical and Materials Engineering Department at Queen's University, Kingston, ON. He obtained his bachelor's and master's degrees in metallurgical and materials engineering from institutions in India. His current research focuses on understanding the degradation mechanisms of the alloy Zr-2.5 Nb, called the pressure tube, a key component in Canada Deuterium Uranium reactors. This research is on the barrier oxide layer of the pressure tube, which contributes to performance improvement and increased operating lifetime, thereby influencing its utilization during reactor refurbishment. Adil also actively supports fellow graduate students with his advanced transmission electron microscopy expertise and collaborates with industry. His contributions have led to 9 peer-reviewed publications and the presentation of his work at national and international conferences.

Honours & Award Press Release- 2024

Fellows of CNS

Doddy Kastanya

Kinectrics



Dr. Kastanya received his bachelor's, master's, and doctorate degrees in nuclear engineering from North Carolina State University. He joined the Canadian nuclear industry in 2005 as a Reactor Physicist in the Reactor Core Physics branch of the Atomic Energy of Canada Limited (AECL) at Sheridan Park. Currently, Dr. Kastanya is a Technical Expert in the Reactor Physics group at Kinectrics Inc. His area of expertise are computational reactor physics, safety analysis, regional/neutron overpower protection (ROP/NOP) for CANDU design, and mathematical optimization for nuclear engineering applications.

Dr. Kastanya has been a technical lead for many reactor-physics projects and authored/co-authored more than 200 technical reports during his tenure at AECL, Candu Energy, and Kinectrics. He has published 34 articles in international nuclear engineering journals, 3 articles in the Canadian Mathematical Society Crux Mathematicorum scientific journal, 27 full-length conference papers, and 11 summary conference papers. In addition to writing technical papers, he also served as a member of many technical program committees for international nuclear engineering conferences such as PHYSOR, Pacific Basin Nuclear Conference (PBNC), Advances in Nuclear Fuel Management (ANFM), and, of course, the CNS Annual Conferences. Dr. Kastanya has also served as a member of the Editorial Board for three international nuclear engineering journals: Progress in Nuclear Energy since 2015, Annals of Nuclear Energy since 2020, and Science and Technology of Nuclear Installations since 2022.

Since 2018, he has been a member-at-large of the CNS Council and actively supports many of its committees (e.g., finance, education and communication, scholarship, and membership). As part of his involvement with the education and communication committee, in 2023, he initiated an annual nuclear-themed essay contest for high-school students. For the council year 2023/2024, Dr. Kastanya served as the President of the CNS.