Canadian Nuclear Achievement Awards

Prix canadiens pour contributions nucléaires exceptionnelles

Canadian Nuclear Society/ Canadian Nuclear Association

2022 Awards

2022 June

Ronald Charles Oberth
Ian McRae Award

The *Ian McRae Award of Merit* was established in 1976 by the Canadian Nuclear Association in honour of the late Ian McRae, the first President of the Canadian Nuclear Association and Chairman of the Board of Directors of the Canadian General Electric Company Ltd. The purpose of this award is to honour an individual for substantial contributions, other than scientific, to the advancement of nuclear energy in Canada.

Dr. Ron Oberth is President and CEO of the Organization of Canadian Nuclear Industries (OCNI), an industry association that represents 240 private sector companies that supply equipment and services to Canadian and offshore nuclear power plants. OCNI supports member companies in connecting with domestic and offshore nuclear utilities, nuclear research centres, and government agencies and ensures that members are abreast with technology innovations, new standards and regulations, and evolving customer needs. Prior to joining OCNI Ron served in various technical, project and business development roles for more than 30 years with AECL, Ontario Hydro International, and Ontario Power Generation.

Dr. Oberth is a graduate of the University of Manitoba, the University of Toronto's Rotman School of Business, received his PhD in aerospace propulsion from Princeton University, and was a post-doctoral fellow at the Technical University of Munich.

Ron completed the ICD/Rotman Directors Education Program in March 2020 and in January 2021 was invited to serve on the IBB National Pension Fund's Clean Energy Strategy Advisory Committee.

Ron is also a member of the Advisory Board to the Faculty of Energy Systems and Nuclear Science (FESNS) at Ontario Tech University.

Ron exemplifies the characteristics to be sought in a recipient of this award, and this has been consistent throughout his career. Ron has combined a strong and exceptionally broad technical understanding along with business insights, to build success in planning, project development and business development, which have created profound benefits for Canada's nuclear sector. His positive and people-centred approach has built strength throughout our nuclear community through trusted relationships. The results have been an outstanding record of achievement that thoroughly merits this award

Michael Grey
Harold A. Smith Outstanding Contribution Award

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. 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.

Mike is a Certified Health Physicist and Registered Occupational Hygienist with over 35 years of experience in the environment, health & safety field, specializing in decommissioning nuclear facilities, the management of radioactive and hazardous wastes and the remediation of contaminated sites. He attended the University of Waterloo where he received a B.Sc. in Physics in 1978 and a M.Sc. in Chemical Physics in 1982. He began a doctorate in Medical Biophysics at the University of Western Ontario but did not complete the degree for medical reasons. He later completed a post-graduate diploma in Occupational Health & Safety at McMaster University in 1996.

Mike began his health physics career at the Point Lepreau Nuclear Generating Station. He was later employed at Zircatec Precision Industries, a uranium fuel fabrication facility in Port Hope, ON and MDS Nordion in Ottawa, ON and then

spent 11 years with Canatom NPM Inc in several different positions. Mike joined Candeso in 2005 and remained with the company after it was acquired by Kinectrics in 2009. He retired from Kinectrics in March 2022. Over the course of his career, he has completed projects in Australia, Georgia, Hong Kong, Romania, South Korea and the Ukraine (Chernobyl).

Mike has been a member of the Canadian Standards Association Technical Committee on the Decommissioning of Nuclear Facilities since 2007 and he served two terms as Chair of that TC (2015-2021). He also serves as a member of the CSA Technical Committee on radiological protection of the environment. He is a Past-President of both the Canadian Radiation Protection Association and the Occupational Hygiene Association of Ontario, and he participated in an IAEA Technical Co-operation Mission to Pakistan during 2018 & 2019 to support the decommissioning of the KANUPP-1 Nuclear Power Plant.

Mike received the Distinguished Achievement Award of the Canadian Radiation Protection Association for his contributions to radiation protection in Canada in 2010 and the Award of Merit from the Canadian Standards Association for his work on the development of standards in decommissioning, environmental protection for nuclear facilities and radioactive waste management in 2016.

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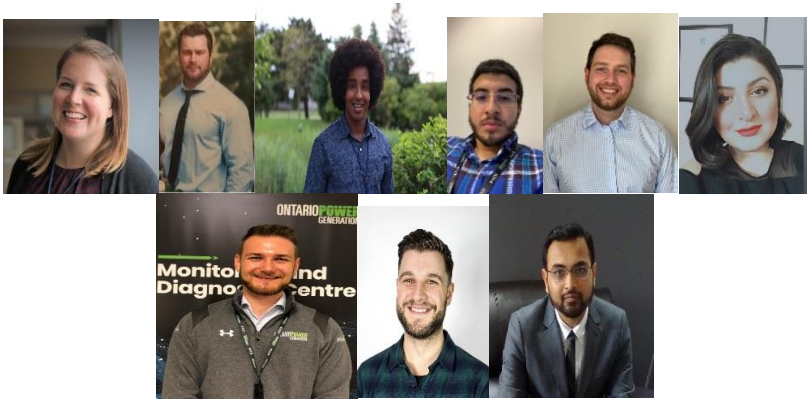
OPG Monitoring & Diagnostic Center
Innovative Achievement Award



From l to r (top row): Mailiis Qaqish, Jon Bruce, Eddy Nur, Ali Khafagy, Joe Metzler, Nazgol Shahbandi
L to r (bottom row): Adam Opolski, Dan Foster-Roman, Sanket Patel

Recipients of the award are specially recognized for significant innovative achievement or the implementation of new concepts, which display clear qualities of creativity, ingenuity and/or elegance, and embody an impressive accomplishment in the nuclear field in Canada. This award was established by the CNS in 1991.

The M&DC outreach and engagement strategy has successfully developed a strong culture around the program. Benchmarking of top industry M&D Centre's, for example, at Duke Energy Nuclear and Southern Company showed how difficult it is to establish and maintain buy-in from station stakeholders and the risks to an M&DC program if the culture is lost. At OPG this culture is defined by the network of people built on collaboration and trust that resulted in growth of requests for monitoring and analytics from site teams, the scope and capabilities of the M&DC through new and innovative applications and ultimately important KPIs such as avoided costs which doubled within 2021 alone. Overall, these efforts have positioned OPGs M&DC as a leader in the industry and the team will continue to innovate and build from the cultural momentum ensuring high levels of Equipment Reliability and Operational Excellence into the future. Team members include: Dan Foster-Roman, Joe Metzler, Adam Opolski, Ali Khafagy, Maillis Quaquish, Eddy Nur, Jon Bruce, Nagol Shahbandi and Sanket Patel. Bios below:

Dan Foster-Roman: “Dan Foster-Roman is the manager of Ontario Power Generation’s Monitoring and Diagnostic Centre team who provide a variety of analytics and monitoring services across OPGs Nuclear, Thermal and Renewable Generation fleet. His focus is on applying machine learning and physics-based modeling and continuous monitoring to enable data-driven decision making and prevent costly equipment failures. Dan is a Mechanical Engineering graduate from McMaster University and has completed a Machine Learning Certification from Cornell University.”

Joe Metzler: “Joe Metzler is a Mechanical Engineer with an M.ASc. in Nuclear Engineering. Joe has worked at OPG as a Nuclear station engineer, an asset management specialist in hydroelectric operations, and as an M&D Centre Analyst.”

Adam Opolski: “Adam Opolski is an analyst at OPG’s Monitoring & Diagnostic Centre responsible for the online monitoring of SE, NW, and NW hydro generating station regions. Adam graduated in 2020 from McMaster University in Chemical Engineering.”

Ali Khafagy: “Ali Khafagy is currently an Assistant Technical Engineer/Officer within Ontario Power Generation’s Monitoring and Diagnostic Centre. He is a recent graduate from the University of Waterloo who loves to learn, and he looks forward to continuing to grow in the industry.”

Mailiis Qaqish: “Mailiis is currently an analyst in the Monitoring & Diagnostic Centre at Ontario Power Generation. She received her Bachelor of Applied Science in Chemical Engineering from the University of Waterloo and has been working at Ontario Power Generation for over 14 years, supporting both the Pickering and Darlington nuclear generating stations.

Eddy Nur: “Eddy Nur is a data analyst at Ontario Power Generation’s Monitoring & Diagnostics (M&D) Centre, where he has performed routine monitoring of process data and equipment condition data from across OPG’s fleet. He has also been involved in efforts to expand the Centre’s monitoring scope; including the design and development of monitoring solutions for large-power transformers, 4 kV induction motors, generator hydrogen cooling systems, and more. Eddy has a degree in Nuclear Engineering from Ontario Tech University.”

Jon Bruce: “Jon Bruce is the thermal performance analyst at OPG’s Monitoring and Diagnostic Centre. Jon has worked in the nuclear industry for over 10 years and developed a passion for thermal performance monitoring of power plants. Outside of work, Jon enjoys recreational hockey, motorcycling and weight training. He also spends his free time working as a volunteer for the Kids Ministry at Sanctus Church.”

Nazgol Shahbandi: “Nazgol Shahbandi is a Data Scientist working in Ontario Power Generation’s Monitoring and Diagnostic Centre. Her background is Mathematical and stochastic modeling and over the last years, her focus has been on the implementation of AI and ML strategies in Ontario Power Generation’s Online Continuous Monitoring, Condition Based Maintenance programs and Equipment Diagnostic and Prognostic

modeling for nuclear, hydro and thermal generating assets. She is also OPG advisor in Electrical Power Research Institute's (EPRI) Plant Modernization program. Nazgol has received her master's degree in Applied Mathematics from University of Waterloo."

Sanket Patel: "Sanket Patel is an analyst at OPG's Monitoring & Diagnostic Centre focused on development of tools for data analysis and visualization. He has over 8 years of experience in engineering and equipment reliability in the power generation industry and received his degree in Electrical Engineering from Ryerson University."

Canadian Nuclear Laboratories SLOWPOKE-2 refuel team John S. Hewitt Team Achievement Award

McConnell, Bryon D.
Atfield, Julian;
Beebe, Brianna;
Spencer, Madalena
Joynes, Paul
Kotsios, Nikolaos
Godin, Mike
Battersby, Jeffrey;
Pruszkowski, Barbara
Garrick, David
Sharma, Geetika;
Nguyen, Sinh
Wilson, Benjamin
Ragheb, Hala
Bouchard, Marc
Walsh, Perley
Spencer, Justin
Thiriet, Catherine;
Crigger, James
Leeder, Shawn
Audette, Shane;
Kuehl, Jeremy
Moore, Gaige
Boniface, Kendall
Rose, Brenda;
Schrader, Barbara
Yue, Shuwei
Lair, Normand
Taylor, Tracy
Poff, David
Cluff, Daniel;
DeJong, Jeff
Morrison, Patrick
Ahmed, Imtiaz
Soloan, Robyn;
Barton, Kristy
Girodat, Michael
Molson, Michael
Godin, Mike
Yaraskavitch, Luke
Edwards,Geoffrey
Paluch, Matthew
Morris, Dale
Bergeron, Andrew
Lee, Nathan
Karam, Mahmoud
Barbulescu, Horatiu
Summers, Keith
De Waele, Carla

The *John S. Hewitt Team Achievement Award* was established by the CNS in 1994. The award is named in honour of a founding member of the Canadian Nuclear Society, who provided strong support to the Society over many years. This award recognizes the recipients for outstanding team achievements in the introduction or implementation of new concepts, or the attainment of difficult goals in the nuclear field in Canada.

The SLOWPOKE-2 core refuelling project was an extremely complex technical undertaking by the Canadian Nuclear Laboratories (CNL) requiring CNL to coordinate with several organizations including: RMC, contract support personnel from the Military Personnel Command, Defence Construction Canada, Director Services Contracting, the Canadian Defence Academy, Public Services and Procurement Canada, and the Calian Group Limited. A multifaced strategy was developed by CNL that involved great teamwork and co-operation. It also required a substantive technical knowledge and practical capability for this challenging project, produced an outstanding and important accomplishment that was completed both on time and on budget. This strategy involved a detailed project management plan to meet fiscal, risk analysis and procurement responsibilities with a full integration of environmental, technical, and regulatory requirements. The scope for core fabrication and reactor commissioning at CNL involved detailed and innovative engineering work, radiation management and a protection plan, and environmental due diligence for the transportation of dangerous goods and storage of highly radioactive waste for disposal. Successful completion of this complicated project has facilitated the extension of the SLOWPOKE-2 nuclear reactor for decades into the future.

Team Lead **Justin Spencer** has been a research scientist at AECL and CNL since 2012. His primary focus is severe accident phenomenology; however, he has also led CNL's SLOWPOKE program as SLOWPOKE Coordinator since 2018. In this role, he has led two major projects: CNL's contribution to the decommissioning of the Saskatchewan Research Council (SRC) SLOWPOKE facility, and the 2021 refuelling of the Royal Military College of Canada (RMC) SLOWPOKE reactor. In the latter project, he served as technical lead of the project, but was intimately involved in execution of work in areas ranging from negotiation of the contract, to radiological shielding analysis for the irradiated fuel extraction process and on-site operations. Justin has led numerous investigations into CANDU in-vessel retention phenomena, including: critical heat flux in various locations around the calandria vessel periphery, convection and heat transfer in the corium pool, performance of the calandria vessel under thermomechanical stresses, and the formation of frozen corium plugs in vessel penetrations. In addition, he serves as the COG Safety and Licensing Containment and Severe Accident Working Group vice chair, is involved in various OECD NEA and IAEA projects, and is the head of the Severe Accidents section in CNL's Nuclear Safety Experiments Branch. He has an undergraduate degree from Colgate University majoring in Physics and Mathematics, an M.A.Sc. from McMaster University in Engineering Physics, and is completing a PhD at McMaster University in Engineering Physics on a part time basis.

Darlington Nuclear Refurbishment RP Team
John S. Hewitt Team Achievement Award

Mary Duarte, OPG Justin Alizadeh, Canatom Johnathon Hash, OPG
Joe Cicchini, OPG Scott Stafford, OPG

This nomination is in recognition of innovations in tooling/equipment, shielding and RPPE, which in conjunction with Darlington Nuclear Refurbishment Unit 2 (DNRU2) lessons learned, resulted in a 38% dose savings to vendor partners and OPG workers involved in the refurbishment of Darlington Nuclear Refurbishment Unit 3 (DNRU3). Contributing to this achievement is a diverse and inclusive team of highly motivated OPG and vendors partners operating effectively as ONE TEAM. Team members include: Mary Duarte, Johnathon Hash, Joe Cicchini and Scott Stafford from OPG and Justin Alizadeh from Canatom showcasing the ONE TEAM culture.

Mary Duarte is a graduate of McMaster University with a Bachelor of Science degree in Chemistry, and a Bachelor of Engineering degree in Chemical Engineering. Mary's nuclear career started at AECL in the Chemistry area. She was subsequently hired by OPG where she has 31 years of experience occupying a variety of roles at PNGS, DNGS and in the Corporate office. At PNGS, Mary began her career in Chemistry, then moved to projects where she had the technical lead role for boiler tube inspection and maintenance work. This experience led Mary to a role as Vault Supervisor at PNGS supporting outages as a shift worker. Mary had a variety of other roles including EQ as project lead, and Regulatory Affairs where she prepared license submissions. Her first significant leadership role was as the Chemistry and Environment Manager for the Pickering site with a staff complement of approximately 120, consisting of Chemical Technicians and technical support staff. Mary was later promoted to the position of Training Director where she oversaw training programs for engineering, radiation and worker safety, chemical technicians and Plant Access

Training (PAT) for all staff. During this period, she won an OPG “Power of You” award for efficiencies in streamlining this PAT training program at OPG. A staff complement of approximately 130 instructors delivered training in the listed areas. Mary was promoted to her current position of Director of Radiation Safety for the OPG Nuclear fleet in 2019. At that time Mary had accountability for the program, its implementation, and all RP staff across OPG. Peak staff levels, including outages and Darlington refurbishment, exceeded 400 workers. Under Mary’s leadership, the OPG RP program has excelled, winning several awards, recognizing the outstanding work supporting the Darlington refurbishment project.

Team Achievement Award for the HEU TRM (Highly Enriched Uranium Target Residual Material) project

John S. Hewitt Team Achievement Award

Catherine Lockley, CNL **Bill Visneski, CNL** **Jim McKenna, AECL**
Pierre Tanguay, CNSC **Mark Chapman, CNL** **Sean Deighton, CNL**
Michael Molson, CNL **Natalie Sachar, CNL**

For context, HEU (highly enriched uranium) produced in the U.S. was used in Canada as a source fuel in a number of nuclear research reactors, and was also used to produce life-saving medical isotopes at Chalk River Laboratories (CRL), operated by Canadian Nuclear Laboratories Ltd. (CNL). In April 2010, Canadian Prime Minister Harper and U.S. President Obama committed to returning spent HEU fuel to the U.S. as part of a broad international effort to consolidate HEU inventories in fewer locations around the world. The commitment promotes non-proliferation by removing existing weapons-grade material from Canada and eliminates a nuclear liability for future generations of Canadians. Once the material is returned to the U.S., it is reprocessed and used in American nuclear power plants to produce energy. The successful completion of the HEU TRM repatriation project reflects AECL's and CNL's commitment to Innovation, Teamwork and Excellence. The initiative started with a proposal to pursue repatriation to eliminate the TRM liability decades earlier than planned, in order to reduce the site risk. From this vision, the integrated Project Team leveraged support

and leadership from hundreds of employees with an unwavering commitment to safety and excellence. The completion of this initiative in 2020 after a decade of work demonstrated CNL's ability to develop and implement solutions to one of the most challenging nuclear projects on an international stage.

Congratulations to this collaborative team on completing this inspiring work. Team members include: Catherine Lockley, Jim McKenna, Mark Chapman, Michael Molson, Bill Visneski, Pierre Tanguay, Sean Deighton and Natalie Sachar.

Jim McKenna is currently Director, Strategic Materials with Atomic Energy of Canada Limited (AECL) at the Chalk River Laboratory. He has been with AECL for 20 years, where he has filled multiple positions including: Project & Engineering Managers, Director of Waste Management Operations and Director Facility Decommissioning. Since 2012, Jim has been the Project Director responsible for Canada's Repatriation Programme. Jim retired as a Senior Officer from the Canadian Army after a 21-year career and is a Professional Engineer with a MASc in Structural Engineering.

Dazawray Landrie-Parker
Education & Communication Award

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

Dazawray Landrie-Parker (*Métis*) is the Director, Nuclear Sector at Creative Fire. She is also a PhD Candidate in Public Policy at the University of Saskatchewan (U of S) and an instructor at Yukon University. She has an extensive background working with Métis Nation-Saskatchewan (MNS) where she held several senior positions - including Director of Operations, Director of Intergovernmental Affairs and Senior Policy Analyst.

Dazawray's Métis ancestry fueled her focus on Indigenous communities and inspired her undergraduate degree in Native Studies from the U of S. and her subsequent degree-Master of Governance and Entrepreneurship in Northern and Indigenous Areas offered jointly by University of Tromsø-The Arctic University of Norway and the U of S. As the culmination of her program,

Dazawray researched and built a community engagement framework for nuclear energy engagement in northern communities and the Policy for Public Engagement for the City of Saskatoon.

As Director of the Nuclear Sector practice with Creative Fire, Dazawray leads a team of diversified subject matter leaders in the areas of Indigenous Engagement, Public Engagement, Communications and Strategy for Creative Fire's nuclear clients including Ontario Power Generation, Sask Power and the NWMO. In addition, Dazawray is a huge champion for the nuclear industry, being featured on many panels on best practices in Indigenous and public engagement. Dazawray is Canada's foremost expert in this field and is respected for her ability to have open and honest dialogue with communities across Canada and the world about future energy solutions. Dazawray is tireless in supporting early and active meaningful engagement, supporting education and dialogue around energy solutions and giving the opportunity for creative collaborations and partnerships. Dazawray has been a strong supporter and champion of the nuclear industry for over ten years and has been at the forefront of research, education and communication around Small Modular Reactors around the world.

Dr. Aman Usmani
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.

Dr. Usmani has over 45 years of distinguished career in Nuclear Power Plant design, analysis and management and has held various design engineering and management positions of increasing responsibilities at AECL, AMEC Foster Wheeler Nuclear Canada and Kinectrics where he is currently employed in a management position as Principal Consultant. • Dr. Usmani is a long-time member of CNS council, past Co-chair of Nuclear Operations and Maintenance division, organized and served as Chair of the very successful 2017 CANDU Nuclear and Major Components conference and Chair and co-chair of CNS 2020 and 2021 Annual Conferences. Aman was 2nd Vice President (2018-2019), 1 st Vice President (2019-2020) and the President (2020-2021) of CNS. • Dr. Usmani has been chair of the CSA N289 Technical Committee on seismic design (2013-2019), and member of its subcommittees (2007-2021). • Dr. Usmani won several awards and honours that include the AECL President's Discovery and Distinguished Merit Awards, Canadian Society for Mechanical Engineers (CSME) 2002 Robert W. Canada (EIC).

Hooman Gholamzadeh
R.E. Jervis Award

The R.E. Jervis Award recognizes excellence in research and development carried out by a full-time graduate student in nuclear engineering or related fields. The Award was established in 1992 by former students of Professor Robert Jervis of the University of Toronto, supported by the CNS, to honour his achievements. Professor Jervis was a Canadian pioneer in nuclear chemistry with an inspiring love for science and engineering. His research focused on the peaceful use of nuclear energy in industry, life sciences and forensic sciences. His work on human exposure to heavy metals brought him significant national and international recognition. He also pioneered the use of trace elements to identify sources of pollution, and to assess the environmental impact of fossil fuel combustion.

Hooman Gholamzadeh received his BSc in Materials Engineering; MSc in Materials Engineering-Materials Selection and Characterization and PhD in Materials Engineering-Corrosion engineering at Queen's University under Prof. Suraj Persaud.

His current research area is stress corrosion cracking of Ni- and Fe-based alloys. The focus of his research is on the correlation between dealloying and stress corrosion cracking. The goal is to understand the underlying mechanism of SCC of different Ni- and Fe-based alloys including different steam generators tubing materials in boiling caustic environments where these materials are susceptible to dealloying. His research mostly focuses is on Alloy and the finding could be used to simulate the extreme ends of heat transfer crevices on the secondary side of steam generators. This type of proactive mechanistic research informs the potential degradation of materials of currently operating plants and their life extension.

Dr. Hazen Hezhi Fan
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.

Dr. Hazen Hezhi Fan has worked in nuclear safety engineering area over 30 years. He is a registered Professional Engineer in Ontario, to ensure the public nuclear safety while handling complicated real and postulated nuclear safety issues. Dr. Fan has strong practical work and research experiences in CANDU fuel, fuel channel, and core structures on their performance and integrity issues in AECL then now Candu Energy since 1995. As a specialist engineer and team leader, Dr. Fan has been involved in projects for both domestic (Point Lepreau, Gentilly-2, Bruce, Darlington and Pickering) and overseas (Wolsong, Cernavoda, Embalse, and Qinshan) plants, and in safety report preparation and licensing endeavours with the CNSC and other regulators.

Dr. Fan has also actively and continually supported local communities on behalf of CNS, such as National Engineering Month, Renfrew County Science Fair, Peel Region Science Fair, Bay Area Science & Engineering Fair, in promoting nuclear science and technology. During past years typically Covid-19 pandemic, he also together with other SP Branch executives organized many seminars/workshops to the CNS members and public with topics covering from background of CANDU technology, lessons learned from major NPP events, long term safety for nuclear fuel disposal, to next generation technology and strategies for carbon -free energy

Robin Manley

CNS President's Award

The CNS President's Award is a Special Award, presented at the sole discretion of the CNS President. The President may choose to present the CNS President's Award to an individual, group, or organization that, in his/her opinion, has demonstrated an outstanding achievement or service of benefit to the Canadian Nuclear Society or broader nuclear science and technology community.

Robin Manley graduated from Queen's University in 1986 with a degree in Physics, and took his Master's in Astronomy and Astrophysics at Queen's and Western, with a thesis related to supermassive black holes at the centres of galaxies.

Robin started his work on nuclear power in the UK working with a consulting engineering company, before returning to Canada in 1990 to start working at the Darlington nuclear station in Health Physics. Over 20 years Robin took on various leadership positions in Radiation Protection, including Senior Health Physicist and RP Manager at Pickering B, corporate Health Physics Dept Manager, and RP Manager at Pickering A. During that time, two of Robin's fondest memories are the implementation of OPG's electronic dosimeter program, and of the alpha radiation programs.

In 2011, Robin transitioned into the Nuclear Regulatory Affairs Manager role at Pickering. Robin was responsible for the relicensing of both Pickering and Darlington,

as well as OPG's nuclear waste sites, as he rose through leadership ranks to become the VP of Nuclear Regulatory Affairs and Stakeholder Relations.

In April 2019, Robin was asked to take on the role of Vice-President of New Nuclear Development at Ontario Power Generation, accountable for the implementation of Small Modular Reactors at OPG. The high point of that role has been leading the SMR technology selection announced in Dec 2021 that OPG has chosen GEH as its technology partner for the Darlington New Nuclear Project, to deploy Canada's first grid-scale Small Modular Reactor. In 2022, Robin's focus has transitioned to business development opportunities for additional SMRs to fight climate change and grow the new nuclear business.

Robin has been one of the strongest voices leading this latest nuclear renaissance for our industry and his ability to communicate and connect with all audiences continues to serve us all. For his visionary leadership skills, his dedication and outstanding contributions to the nuclear community, Mr. Manley is awarded the Canadian Nuclear Society President's Award.

2021 - 2022 CNS/CNA Honours and Awards Committee

The following members of the H&A Committee took part in the review of the submitted nominations, and/or contributed to the text and assembly of this H&A Brochure:

Mr. John Gorman
CNA President

Mr. Kamal Verma
Laurentis Energy Partners, CNS President

Mr. Keith Stratton
Stratton Consulting Inc.

Ms. Jennifer Chapin
Ontario Power Generation,

Mr. Daniel Gammage
Kinectrics,

Guy Hotte
Kinectrics

Dr. Mohinder Grover
M.S. Grover & Associates,

Dr. William Kupferschmidt
Retired,

Mr. Derek Mullin
NB Power,

Mr. Ovidiu Nainer
Bruce Power

Dr. Peter Ozemoyah
Tyne Engineering,

Dr. Benjamin Rouben
12 & 1 Consulting,

Dr. Robert Walker
Retired CNL President and CEO,

Dr. Jeremy Whitlock
IAEA, CNS Past President

Tracy Primeau
OPG

Ujjal Mondal
UKM Management Consulting **Inc.**

Logistical Support: Elmir Lekovic- CNS Office

We would also like to recognize our outstanding Students.

Scholarship recipients include:

Undergraduate scholarship ($2,000 each)

Nyah Lavoie (McMaster) and Elena Jolovic (McMaster)

Graduate scholarship ($3,500)

Fiona Baker (UNB)

Travel grants ($1,000 each)

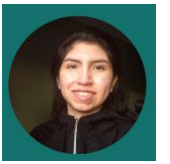
Christina Mohan (Waterloo) and Morgan Collins (Queens)

Student poster winners were:

Undergrad level:

Luisa Vargas Suarez from the University of Calgary

"Build A Nucleus Simulation".



The simulation can be viewed in a number of languages: English, Spanish, French, Italian, Portuguese, Portuguese - Brazil, German, Dutch, Simplified Chinese, and Arabic and has been used by people in dozens of countries to help understand the structure of the nuclei of atoms.

Master's level:

Morgon Collins from Ontario Tech

"Thermo-oxidation kinetics experiments of CuCrZr in steam environments up to 1000 ^{o}C"

This work investigated how oxygen-free high conductivity copper and an alloy of copper, chromium and zirconium oxidized in both oxygen and steam environments. Understanding this oxidation supports reactor safety analysis.

The PhD level had two:

Hooman Gholamzadeh, Queen's University

“The Importance Of Dealloying In The Stress Corrosion Cracking (SCC) Of Alloy 800 In Boiling Caustic Solutions”

The extreme environments inside a nuclear reactor can corrode metals and alloys and cause dealloying (when one element gets separated from the alloy, changing the alloys properties). This study uses state-of-the-art electron microscopy to look carefully at these metals. The results suggest that the dealloying leads to cracks starting in the metal.

And

Victor Udo-Okoro, Queen's University

“Comparative Study On The Isothermal And Cyclic Oxidation Behaviour Of FeCrAl Alloys Exposed To Argon And Steam Environments At High Temperature.”

This work uses electron microscopy to study FeCrAl (an iron, chromium, aluminum alloy) as a potential materials for next generation fuel systems for nuclear reactors. This alloy subjected to steam at high temperatures to see how it would behave if a nuclear reactor were to have an accident.

Thank you to our scholarship committee and Student poster judges for their support.