

# CNS DIET 2023 Day One

Innovation Unleashed

Program Schedule Nov. 6th, In-Person



9:00	OR	Opening Remarks
9:10	AI in the Wild Moderator: Jenell Hogg	Moe Fadaee from Kinectrics
9:25		Mishca De Costa from OPG
9:40		Byron House from Bruce Power
9:55		Vik Pant from PwC
10:10		Q/A Panel
10:30	Coffee Break	
10:50	Woman in Leadership Moderator: Nazgol Shahbandi	Leslie McWilliams from OPG
		Stephanie Smith from Atkins Realis
		Eileen De Courcy from George Brown College
		Cindy Vestergaard from RKVST
		Q/A Panel
12:10	Lunch Break	
Exhibition and Hors d'oeuvres		
1:10	Exhibition Slot 1	
2:10	Networking Slot 1	
2:25	Spot Showcase	
2:40	Networking Slot 2	
2:55	Coffee Break	
3:05	Digital Twins Moderator: Gabe Aversano	Jennifer Wong from PwC
3:20		Chris Dixon from Global First Power
3:35		Patrick Desbiens from Bruce Power
3:50		Bharath Nangia from NPX
4:05		Q/A Panel
4:25	Exhibition and Hors d'oeuvres	

# CNS DIET 2023 Day Two

Innovation Unleashed

Program Schedule Nov. 7th, Virtual



9:00	OR	Opening Remarks
9:10	Powering the Future: Innovations for Advanced Energy Technologies Moderator: Jeff Griffin	Ed Bradley from IAEA
9:25		Tyler Ellis from Commonwealth Fusion
9:40		William Smith from Terrestrial Energy
9:55		Amy Gottschling AECL
10:10		Q/A Panel
10:30	Coffee Break	
10:40	Unleashing Synergy: Frontiers in Nuclear & Beyond Moderator: Rob Jamieson	Devan Wagner from MDA
		Subo Chatterjee from PwC
		David Tucker from McMaster
		Dr. Hany Abdel-Khalik from Purdue University
		Q/A Panel
12:00	Lunch Break	
Stream 1: Artificial Intelligence		
1:00	Artificial Intelligence applications on the nuclear ITER Vacuum Vessel Maria Ortiz de Zuniga, Fusion for Energy - UNED	Harnessing Large Language Models (LLMs) in the Nuclear Industry: OPG's Innovative Solutions Tyler Rankin, Data Analyst for OPG
1:15	Validation of unsupervised anomaly detection techniques applied on NRU Chemistry Plant Data Francois Fergues, CNL	AI/Machine Learning application for Human Performance Improvement Fernando Muniz Simas, EXO
1:30	Using Machine Learning Algorithms for Radioisotope Identification Krassimir Stoev, CNL	Virtual Reality Training Opportunities Clarence LeBlanc, Silverback VR
1:45	Machine learning-based exploration and optimization of GOTHIC state space Adam Giammarese, Numerical Advisory Solutions	Analysis of Human Mental and Cognitive Models for the Development of an EEG-based Human Performance Management System Hossam Gaber, Ontario Tech U
2:00	Q/A Panel	Q/A Panel
2:20	Coffee Break	
Stream 1: Novel Approaches to Nuclear Fuel		
2:30	Clean Core's Thorium and HALEU Fuel for PHWR Paul Chan, Clean Core Thorium Energy	Leveraging Knowledge Management in the Nuclear Industry: Goldfire Cognitive Search Karine King, Accuris
2:45	Nuclear fuel reprocessing through distillation Dominik Böhm, University of Szczecin	Leveraging Data with Single-Source Publishing Manfred Hammers, Rivtec Inc
3:00	Fabrication of spherical uranium dioxide powder for additive manufacturing feedstock Alexi Buenaventura, CNL	Altair Data Analytics & Machine Learning Solution (An Overview) Syed Hassan Arif, Altair Engineering Canada
3:15	Contemporary Uses for Aqueous Homogeneous Reactors Ahmed Shaker, Ontario Tech U	Wild West to Governed Space: The Convergence of AI and Blockchain Cindy Vestergaard, RKVST
3:30	Q/A Panel	Q/A Panel
3:50	Coffee Break	
4:00	Vendor Discussion Moderator: Michele Lunney	Vendor Discussion Panel
4:45		L3Harris
5:00		EXO Insights
5:15		NPX

# CNS DIET 2023 Day Three

Innovation Unleashed

Program Schedule Nov. 8th, Virtual



9:00	OR	Opening Remarks
9:10	International Regulatory Perspective Moderator: Juliana Rapper	Kevin Lee from CNSC
9:25		Luis Betancourt from US NRC
9:40		Nelly Ngoy Kubelwa from IAEA
9:55		Andrew White from ONR
10:10		Q/A Panel
10:30	Coffee Break	
10:40	OCN: Advanced Manufacturing Moderator: Ron Oberth	Stephen Veldhuis from CAMiNA
		Gaëlle Leopold Jean-Marie from NUCOBAM
		David Martilla from Kinectrics & Kasia Izdebska from OPG
		Javier Arreguin Zavala from GE Additive
		Q/A Panel
12:00	Lunch Break	
Stream 1: Emerging Technology and The Canadian Landscape		
1:00	Applications of Emerging Technology in Nuclear Energy - Opportunities and Barriers John de Grosbois, COG	A Preliminary Assessment of an ANN Model to Predict CHF in a Single-element CANDU-37 Fuel Element Simulator Farzin Abbasian, Stern Laboratories Inc.
1:15	Emerging Digital Technologies within the Canadian Nuclear Industry Matthew Medri, Kinectrics	Automating Chimney Swifts Counting Using Computer Vision Kamal Moravej, CNL
1:30	The non-zero impacts and significance of ChatGPT/OpenAI in the nuclear workforce Akira Tokuhiro, Ontario Tech U	Cycle Management and Derate Avoidance Enabled by ML-based Predictive Visibility Timothy Crook, Blue Wave AI Labs
1:45	Q/A Panel	Q/A Panel
2:00	Coffee Breaks	
Stream 1: Emerging Detection Technology		
2:10	Dose Distribution and Neutron Spectra around a D-D neutron Generator Using Bubble Detectors Rachid Machrafi, Ontario Tech U	Digital Twin Based Health Monitoring System for Nuclear Systems: OPG's Vision Daniel Liang, OPG
2:25	On the Possibility of Developing a Dual Neutron/Gamma Spectrometer Rachid Machrafi, Ontario Tech U	The Integration of ROVS for 3D Modeling and Digital Twins Andrew Lawrence, Deep Trekker
2:40	Evaluation of the Space Bubble Detector Response to Heavy Charged Particles Rachid Machrafi, Ontario Tech U	Enhancing Efficiency and Reliability in Nuclear Power Plant Component Inspection through Automated Anomaly Detection and Imaging Techniques Andrew Young, University of Strathclyde
2:55	Study of Superheated Detectors Response to Quasi-Space Neutron Spectra Rachid Machrafi, Ontario Tech U	Kinectrics Digital Engineering Program - Building Information Models and Digitalization of Engineering Workflows Matthew Medri, Kinectrics
3:10	Q/A Panel	Q/A Panel
3:25	Coffee Break	
Stream 1: Novel Approaches to Vision and Visualization		
3:35	Muon Tomography for Nuclear Security and Safeguards at Canadian Nuclear Laboratories Kathryn Hartling, CNL	Shaping the Future of Radiation Detection: 3D-printed Scintillators and Sources Alexi Buenaventura, CNL
3:50	Development of a Soft-Landing System for Space Applications Isaac Lee, Ontario Tech U	Using realistic experimental mock-ups to develop machine-learning-based condition monitoring methodologies for pump seals Salim El Bouzidi, CNL
4:05	Source Term Characterization Using Scene Data Fusion (SDF) for Nuclear Decommissioning Activities Gabriel Aversano, Berkeley Lab	Turbine Valve Actuator Test (TVAT) Equipment Artur Bialas, Curtiss Wright Nuclear Canada
4:20	Real-time, 3D radiation mapping technologies for nuclear power Erika Suzuki, Gamma Reality	Developing machine learning methodologies to quantify valve leakage from acoustic emission signals Salim El Bouzidi, CNL
4:35	Q/A Panel	Q/A Panel
4:50	CR	Closing Remarks