

NDT in Canada

# NDT C 2024

Making every connection count!

June 11 – 13, 2024

Brookstreet Hotel

Ottawa, Ontario, Canada

# Program

Hosted by:

 **CINDE**  
CANADIAN INSTITUTE FOR  
NON-DESTRUCTIVE EVALUATION



## Conference Program

Canadian Institute for Non-destructive Evaluation (CINDE) invites you to join NDT decision makers, technicians, managers, and academics to discuss current issues, see innovative technology and the latest research in NDT.



**Monday June 10, 2024**

**1<sup>st</sup> CINDE Ryder Cup**

Canada vs the World in a fun day of golf. A friendly competition enjoying the award-winning Marshes Golf Club.

**Conference guests enjoy a 20% discount on golf at the Marshes Golf Club as well as Blackbird Falls Mini Putt.**

Please email Jon Stevenson to receive the 20% discount  
– [jon.stevenson@marshesgolfclub.com](mailto:jon.stevenson@marshesgolfclub.com)



**CINDE**  
CANADIAN INSTITUTE FOR  
NON-DESTRUCTIVE EVALUATION

proudly invites you to Niagara Falls  
- your PANNDT conference destination -

**PAN NDT**  
**2025**

JUNE 9-12 • FALLSVIEW RESORT CASINO  
NIAGARA FALLS, CANADA

<https://www.panndt.org/panndtconference>

## Tuesday June 11, 2024

- 8:30-4:00 Pre-Conference XRF Course**  
Location: Founders Room
- 12:00-5:00 Exhibitor Move-In**  
Location: Newbridge Ballroom
- 6:30-8:30 Mix n' Mingle**  
Location: Newbridge Ballroom

Brookstreet Hotel is offering a 10% discount on some spa services. Mention that you are with NDTIC 2024 when making reservations.



NATIONAL  
GALLERY  
OF CANADA

MUSÉE  
DES BEAUX-ARTS  
DU CANADA

Ankosé – Everything is connected – Tout est relié

A tour of the National Gallery of Canada to see how NDT is being used in Art and Culture. Tour will include a tour of the gallery including a painting by Crespi, *An Allegory of the Arts (NGC 38019)*. An X-ray of the painting will be included in the additional tour of the conservation studios showing behind-the-scenes work at the gallery.

### Exhibit Schedule

#### Tuesday June 10, 2024

- 12:00-5:00 Exhibitor Move in
- 6:30-8:30 Mix n' Mingle in  
Exhibitor Hall

#### Wednesday June 11, 2024

- 10:00-4:00 Exhibitor Hall  
Open

#### Thursday June 12, 2024

- 10:00-4:00 Exhibitor Hall  
Open
- 4:00-5:00 Exhibitor Move  
Out

### CINDE Executive Committee

- Chair: Dr. Thomas Krause  
*Royal Military College of  
Canada*
- Past Chair: Ms. Laura Obrutsky  
*M&O Tech Inc.*
- Vice Chair: Mr. Glenn Knight  
*Acuren*  
Mr. Aaron Hunter  
*MFE Inspection Solutions*
- Secretary/ Treasurer: Mr. Ankit Vajpayee  
*Russell NDE Systems Inc.*
- Directors: Ms. Erica Schumacher  
*Extende*  
Mr. Chris Chartier  
*NDT Group*  
Ms. Heather Kleb  
*Bruce Power*

# Wednesday June 12, 2024

8:00-8:30 Breakfast  
 Sponsored by: Quality Control Council of Canada  
 Location: Grand Scheme Ballroom



8:30-9:30 Keynote Speaker – It’s a surprise!  
 Sponsored by: Ontario Power Generation  
 Location: Grand Scheme Ballroom



9:30-10:00 Snack  
 Sponsored by: Quality One Inspection Services  
 Location: Newbridge Ballroom



10:00-11:30 Future of Training – Evolving to Meeting the Demand - Panel  
 Ms. Erica Schumacher - Extende  
 Mr. Craig Martin - CWB  
 Mr. Ed Cabral - CINDE  
 Location: Grande Scheme Ballroom

11:30-12:30 Lunch  
 Sponsored by: MFE Solutions  
 Location: Newbridge Ballroom



	Track 1		Track 2	
	Presenter/ Author	Paper	Presenter/ Author	Paper
12:30	Mr. Ricardo Baiotto Mr. Olivier Arès Mr. Julien Walter	Ultrasonic Phased-Array inspection of HVOF-coated internal diameters of cylindrical components	Miss Selamawit Abate	Simulation and experimental analyses of defects in a pipe elbow using three types of magnetic flux leakage (MFL) circuit designs
1:00	Dr. Wael Abdel Megid	Structural Integrity Assessment Using Acoustic Emission Monitoring and Ultrasonic Examination	Mr. Jawad Dahmani Mr. Julien Walter Dr. Alexandre Beausoleil Mr. Olivier Arès	Non destructive detection of the useful zone in Boron carbide-reinforced metal matrix composites laminated plates
1:30	Mr. Paul Holloway	Pitch-Catch Phased Array for Flange Face Corrosion Inspections	Dr. Piotr Fiborek Dr. Rohan Soman	Simulation of guided wave propagation for damage localization with the self-referencing configuration of fiber Bragg grating sensors
2:00	Mr. Mohammad Ebrahim Bajgholi Mr. Giles Rousseau Dr. Edward Ginzal Dr. Martin Viens Mr. Guy Maes	Insights into Optimal Technique Selection for Improved Flaw Sizing Accuracy in Total Focusing Methods (TFM)	Dr. Nicolas Avdelidis Mr. Angelos Plastropoulos Mr. Kostas Bardis Dr. Henrique Fernandes Mr. Mark Droznika	Detection and measurement of defects on aircraft skin from Visual UAV Inspections

2:30-3:00

Snack

Sponsored by: Quality One Inspection Services

Location: Newbridge Ballroom



	Track 1		Track 2	
	Presenter/ Author	Paper	Presenter/ Author	Paper
<b>3:00</b>	Mr. Bata Nkirda Hena Mr. Ziang Wei Mrs. Luc Perron Dr. Clemente Ibarra-Castanedo Dr. Xavier Maldague	Exploring the Frontiers of Synthetic Image-Based Deep Learning Training in Digital X-ray Radiography.	Dr. Etienne Provencal Dr. Marco Michele Sisto	Demonstrating Probability of Detection of Indications in a Heat Exchanger with Assisted Analysis Using Artificial Intelligence
<b>3:30</b>	Mr. Ken Chaplin	Radiation and Risk	Dr. Julien Baumeyer Dr. Hermine Chatoux Dr. Patrick Marquié Mr. Arnaud Pelletier	AI machine for defects detection and defects length measurement in Magnetic Particle Inspection
<b>4:00</b>	Mr. Muzibur Khan	Digital Detector Array for Non-destructive Radiographic Imaging of Aircraft Structures	Mr. Stéphan Couture	Universal File Format for NDT 4.0

4:30-5:30 CINDE Annual General Meeting (AGM)  
Location: Founders Room



6:30-9:00 CINDE Awards Banquet  
Sponsored by: UTEX  
Location: Golf Course Outdoor Pavilion  
(behind the Jazz Bar)



### CINDE Awards

<b>NDT Innovation Award</b>	This award is provided to an organization that has provided a novel technique/product that has improved the way that NDT and inspection is performed in Canada. The award winner must be a Corporate/Small Business member of CINDE and must have operations located within Canada.
<b>Technology Achievement Award</b>	Established in 1983, this award is given to an individual who has made an outstanding technical contribution to NDT in Canada. Recipients are selected on the merit of their technical achievement and the resulting paper as published in a recognized technical journal.
<b>Canadian NDT Research Award</b>	For outstanding and sustained excellence within NDT research and development that has contributed to innovation and/or breakthroughs that have benefited Canadian society and industry partners.
<b>Fellow of CINDE</b>	Established in 1983, this award is given to a CINDE member who has made continuous and significant contributions to the advancement of NDT / NDE in the scientific, technical, educational, managerial or related areas. Nominees must have at least 10 years membership in CINDE, with 5 continuous years of membership immediately prior to the nomination.

# Thursday June 13, 2024

8:00-8:30 Breakfast  
Location: Grand Scheme Ballroom

8:30-9:30 Keynote Speaker –Rob Skwirut, NRCan  
Sponsored by: Ontario Power Generation  
Location: Grand Scheme Ballroom



9:30-10:00 Snack  
Sponsored by: Quality One Inspection Services  
Location: Newbridge Ballroom



10:00-11:30 Certification Panel – discuss current topics in certification  
Mr. John Chen - ASNT  
Mr. Larry Etherington – NRCan  
Mr. Rob Skwirut - NRCan  
Location: Grande Scheme Ballroom

11:30-12:30 Lunch  
Sponsored by: MFE Solutions  
Location: Newbridge Ballroom





	Track 1		Track 2	
	Presenter/ Author	Paper	Presenter/ Author	Paper
<b>12:30</b>	Mr. Louis-Phillippe Gendron Mr. Stéphan Couture Mr. Alexandre Gregoire	Ultrasonics is Ultrasonics: Understanding Advanced Techniques Such as Plane Wave Imaging	Mr. Vijay Babbar Mr. Richard Lakhan	Influence of Steam Generator Tube-to-Tube Proximity on Detection and Sizing of Tube-to-Tube Wear Flaws using Eddy Current Probes
<b>1:00</b>	Mr. Philippe Rioux Mr. Renato De Paula Mr. William Haworth	Phased Array Ultrasonic Inspection of Structural Bolts in Construction and Bridge Applications	Dr. Victor de Haan Mr. Riccardo Scottini	Absolute wall thickness measurement of conducting plates using pulsed eddy currents
<b>1:30</b>	Mr. Dave Seto	Air Coupled Ultrasound for Aerospace Applications	Dr. Luiz Almeida Mrs. Ana Brandão Dr. Clara Pacheco Dr. Gabriela Pereira	Portable Eddy Current Inspection System with Real-Time SVM Classification of the Aging States of Steam Reforming Furnace Tubes
<b>2:00</b>	Mr. Vlad Tusinean Dr. Ryan Scott Mr. Danilo Stocco Dr. Andriy Chertov Dr. Roman Maev	Real-time Segmentation of Ultrasonic M-scans from Process Monitoring of Resistance Spot Welding Using Deep Learning	Dr. Thomas Krause Mr. Owen Purdy Mr. Perryn Bennett	Extracting Proximity of LISS Nozzles to CANDU® Fuel Channels from Eddy Current Gap Probe Data using Deep Neural Networks

2:30-3:00 Snack

Sponsored by: Quality One Inspection Services

Location: Newbridge Ballroom



Track 1		Track 2		
	Presenter/ Author	Paper	Presenter/ Author	Paper
3:00	Dr. Afshin Sadri Dr. Wai Lai Ying	NDT Techniques for Furnace Refractory Lining Assessment	Mr. Julien Walter Dr. Alexandre Beausoleil Mr. Olivier Arès Mr. Bernard Bleau Mr. Benoit Leblanc Mr. Simon Bossé	Robotized phased-array inspection of sandwich-structured aircraft component
3:30	Mr. Krassimir Stoev	Multi-Energy Radiography of Organic Materials	Dr. Catalin Mandache Mr. Muzibur Khan	Qualification of Bolt-Hole Eddy Current Inspections Using Numerical and Experimental Input
4:00	Mr. John Chen	How to Write a NDE Procedure	Mr. Frank Hawkins Dr. Mahesh Pandey Dr. Thomas Krause	Statistical Analysis of Flaw Growth Rate in CANDU® Nuclear Reactors
4:30	Mr. Sikandar Sajid Mr. Luc Chouinard Mr. Benoit Fournier	Detection of ASR Damage in Concrete Using Non-linear Impulse-response Test	 cwbgroup Presenter Gift Sponsor	 Name Badge Sponsor

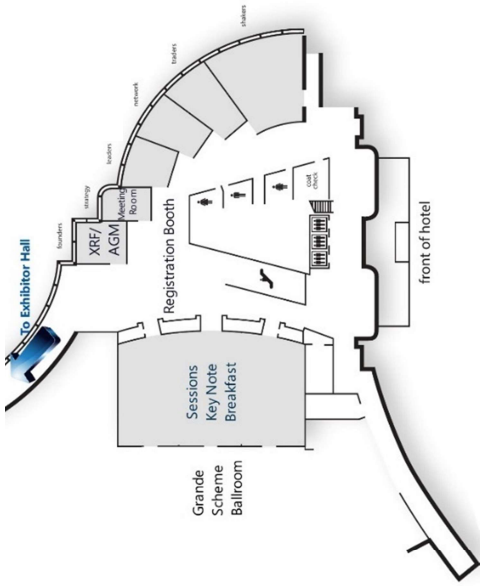
5:00-6:00 Closing Ceremonies  
Location: Grand Scheme Ballroom

### Student Posters

Presenter/Author	Poster
Mr. Finley Van Barr	Eddy current Method for Inspecting Foil-to-Tab Weld Quality in Li-ion Batteries
Ms. Kate Van Herpt Dr. Catalin Mandache, Dr. Peter Underhill, Dr. Thomas Krause	Eddy Current and Ultrasonic Array Investigation of Sub-Surface Defects in Additive Manufactured Metallic Parts
Miss Tarrynne Radley Mr. Peter Ross Underhill, Dr. Thomas Krause	Remote pulsed eddy current detection of cracks in future Canadian F-35 inner wing spar without wing skin removal
Miss Jayani Kanchana Kanakaradne	Illuminating Flaws: Harnessing Eddy Current Thermography for Precision Inspection
Mr. Brandan Halliday Mrs. Allyson Eastmure, Dr. Ross Underhill, Dr. Thomas Krause	Detecting near-surface, sub-millimeter voids in additively manufactured Ti-5V-5Al-5Mo-3Cr alloy using a transmit-receive eddy current probe
Ms. Julia Milne Mr. Ross Underhill Dr. Diane Wowk Dr. Thomas Krause	Magnetic Barkhausen noise technique for detecting residual stress in CF-188 aircraft landing gear
Mr. Aiden Darling, Mr. Owen Purdy, Mr. Peter Ross Underhill, Mr. Thomas Krause	Deep Neural Networks for Multi-Parameter Extraction from Eddy Current Gap Data

\*Posters will be judged Thursday during lunch

## Sessions Hall – Grand Scheme Ballroom



## Exhibitor Hall – Newbridge Ballroom



**Brookstreet WiFi**  
 Brookstreet\_Meeting  
 Password: Brookstreet2024

Look for the Conference App  
 (NDTIC) in your App  
 store for full program  
 details and access to  
 the conference Game!