



Program

Details about the program schedule for the Canadian AI and Robots & Vision Conference 2025 will be provided on this page. The schedule will include information on keynote sessions, paper presentations, workshops, and special events. Please check back regularly for updates as we finalize the lineup of speakers and sessions. All program details will be shared here to help you plan your participation in the conference.

Artificial Intelligence

Program at a Glance

The following is a Google Calendar for the events of the main conference.

The timezone is indicated by Google in the lower left corner of the calendar.

Click on individual events for more details. You can add the whole calendar to your agenda by using the link in the lower left corner.

Most events take place at the Taylor Institute for Teaching and Learning ([Google Maps](#)), in Room 160 ([ground floor plan](#)).

The banquet on Wednesday will be held in Hall AB - MacEwan Student Centre, 402 Collegiate Blvd NW, Calgary.

Detailed Program

Most events take place at the Taylor Institute for Teaching and Learning (Google Maps), in Room 160. The banquet on Wednesday will be held in Hall AB - MacEwan Student Centre, 402 Collegiate Blvd NW, Calgary.

Monday, 26 May 2025	
9:00 — 9:30	Welcome and Opening Remarks
9:30 — 10:30	Session 1 - Knowledge Representation
Room 160 Chair: TBA	
9:30	<div>67</div> <i>On the Semantics of Actual Causality in Situation Calculus Concurrent Game Structures</i> Mohammad Hossein Karimian (University of Regina); Shakil Khan (University of Regina) ✉; Yves Lespérance (York University)
9:50	<div>185</div> <i>Dynamic Causal Attention with Sparse Temporal Networks for Interpretable Causal Discovery in Multivariate Time Series</i> Miloud Mihoubi (University Of télug) ✉; Meriem Zerkouk (University of Télug); Belkacem Chikhaoui (University of Télug)

10:10 [198] *SAT for Upward Book Embedding: An Empirical Study*
Rustem Kakimov (Lakehead); Xing Tan (Lakehead) ✉

11:00 — 12:30 Session 2 - Reinforcement Learning and Optimization

Room 160
Chair: TBA

11:00 [2] *SPADE: Solving the Multi-Depot Vehicle Routing Problem with Inter-Depot Routes Using Multi-Agent Deep Reinforcement Learning*

Arash Mozhdehi (University of Calgary); Mahdi Mohammadzadeh (University of Calgary); Saeid Kalantari (University of Calgary); Beom Sae (Shawn) Kim (University of Calgary); Xin Wang (University of Calgary) ✉

11:18 [28] *The QBF Cover encoding for Harary Tic-Tac-Toe's*

Steve Boucher (UQAM); Roger Villemaire (Université du Québec à Montréal) ✉

11:36 [34] *Towards Inference in Arithmetic Circuits by Exploiting Barren Variables*

Cory Butz (University of Regina) ✉; Jhonatan Oliveira (Talawa AI); Kadence Meredith (University of Regina)

11:54 [113] *Balanced-Boundary IoU: A Holistic Algorithm Towards Improving Segmentation Evaluation Metric*

Sidratul Montaha (University of Calgary) ✉; Rashik Rahman (University of Calgary); Nathan Weiss (University of Calgary)

12:12 [150] *Agile Reinforcement Learning for Real-Time Task Scheduling in Edge Computing*

Amin Avan (Ontario Tech University) ✉; Akramul Azim (Ontario Tech University); Qusay Mahmoud (Ontario Tech University)

14:00 — 15:00 Session 3 - Speech and Language

Room 160
Chair: TBA

14:00 [73] *Neural Wavelet Packet-Based Bidirectional Autoencoder for Multi-Resolution Speech Enhancement*

Alaa Nfissi (Concordia University) ✉; Wassim Bouachir (TÉLUQ University); Nizar Bouguila (Concordia University)

14:20 [166] *The Power of Adaptation: Boosting In-Context Learning through Adaptive Prompting*

Shuzhang Cai (University of Texas at Dallas); Twumasi Mensah-Boateng (University of North Texas); Xander Kuksov (University of North Texas); Jing Yuan (University of North Texas); Shaojie Tang (University at Buffalo) ✉

14:40 [170] *Attenuating Catastrophic Forgetting of Token-Level Knowledge in Contrastive Sentence Embeddings with Attentive Pooling*

Liao Saifei (University of Toronto) ✉; Jingceng Niu (University of Toronto); Gerald Penn (University of Toronto)

14:00 — 15:00 Session 3 - Speech and Language

Room 160
Chair: TBA

15:00 [23] *Improving Patient-Clinical Trial Matching Using Convolution Neural Networks*

Yousif Salman (Wilfrid Laurier University); Emad Mohammed (Wilfrid Laurier University) ✉; Cassandra Hui (HealMary)

15:18 [50] *InceptoFormer: A Multi-Signal Neural Framework for Parkinson's Disease Severity Evaluation from Gait*

Safwen Naimi (TÉLUQ) ✉; Arij Said (TÉLUQ); Wassim Bouachir (TÉLUQ); Guillaume-Alexandre Bilodeau (Polytechnique Montréal)

15:36 [59] *Transfer Learning for Multi-Lead ECG Analysis in Cardiac Arrest Risk Classification*

Zahra Safari (University of Calgary); Emad Mohammed (Wilfrid Laurier University) ✉; Behrouz Far (University of Calgary)

15:54 [155] *Real-Time Plant Disease Detection Using YOLOv8 on a Low Resources Device*

Usama Mohiuddin (Wilfrid Laurier University); Emad Mohammed (Wilfrid Laurier University) ✉

16:12 [200] *A Comparison of Autoencoders and Variational Autoencoders for Anomaly Detection in Dermoscopic Skin Lesion Imagery*

Andrew McIntyre (Acadia University) ✉

Tuesday, 27 May 2025

11:00 — 12:30 Session 5 - Large Language Models (LLMs) and Natural Language Processing (NLP)

Room 160
Chair: TBA**11:00 [81] Aligning Language Models Using Multi-Objective Deep Reinforcement Learning**

Yage Zhang (Department of Computer Science, Brock University); Xiaodan Zhu (Department of Electrical and Computer Engineering, Queen's University); Yifeng Li (Department of Computer Science, Brock University) ✉

11:18 [103] Enhancing Memory Recall in LLMs with Gauss-Tin: A Hybrid Instructional and Gaussian Replay Approach
iing muttakhiroh (Concordia University) ✉; Thomas Fevens (Concordia University)**11:36 [106] Let's CONFER: A Dataset for Evaluating Natural Language Inference Models on CONditional InFERence and Presupposition**

Tara Azin (Carleton University) ✉; Daniel Dumitrescu (University of Ottawa); Diana Inkpen (University of Ottawa); Raj Singh (Carleton University)

11:54 [158] On Pre-training and Self-training

Yiheng Wang (Peking University); Jiayu Lin (Peking University); Zuoquan Lin (Peking University) ✉

12:12 [162] On the Influence of Discourse Relations in Persuasive Texts

Nawar Turk (Concordia University - CLaC Lab) ✉; Sevag Kaspar (Concordia University); Leila Kosseim (Concordia University)

14:00 — 15:00 Session 6 - Machine Learning – Classification

Room 160
Chair: TBA**14:00 [24] Fast Graph Neural Network for Image Classification**

Mustafa Mohammadi Gharasue (University of Windsor) ✉; Luis Rueda (University of Windsor)

14:20 [128] Enhancing Predictive Coding Networks for Multi-Modal Generation and Classification

Ehsan Ganjidoost (University of Waterloo) ✉

14:40 [145] Reliability-Driven LiDAR-Camera Fusion for Robust 3D Object Detection

Reza Sadeghian (University of Ottawa) ✉; Niloofar Hooshyaripour (University of Ottawa); Chris Joslin (Carleton University); WonSook Lee (University of Ottawa)

15:30 — 17:00 Session 7 - Applications II - Security, Adversarial ML, and Anomaly Detection

Room 160
Chair: TBA**15:30 [94] On the Impact of Imbalance Handling Techniques in Deep Learning Models for Malware Detection**

Dan Zhu (New York Institute of Technology); Shijia Zhang (New York Institute of Technology); Jing Li (New York Institute of Technology); Sara Khanchi (New York Institute of Technology) ✉

15:48 [164] Generating Malicious Demonstration Policies to Exploit Vulnerabilities in Inverse Reinforcement Learning

Arezoo Alipanah (University of Waterloo) ✉; Yash Pant (University of Waterloo)

16:06 [177] Detecting Aimbot Usage in Minecraft Using a Long Short-Term Memory Model

James Vandersluis (University of Waterloo) ✉; Alexander Wong (University of Waterloo)

16:24 [188] SAGNN+CS: A Resilient Graph Neural Network Framework Against Backdoor Threats

Abhijeet Dhali (Brock University) ✉; Renata Dividino (Brock University)

16:42 203 Handling Concept Drift in Fraud Detection: A Replication Study

Mustafa Topal (AI4U Inc.) ✉; Aysun Bozanta (Boğaziçi University); Eray Erer (Boğaziçi University); Ayşe Başar (Toronto Metropolitan University)

Wednesday, 28 May 2025

11:00 — 12:30 Session 8 - Vision and Multimodal Systems

Room 160

Chair:TBA

11:00 95 Multimodal Emotion Recognition with Cross-Attentive Learning and Feature Fusion

Alaa Nfissi (Concordia University) ✉; Ines Jemmali (Concordia University); Wassim Bouachir (TÉLUQ University); Nizar Bouguila (Concordia University)

11:18 98 MAC: Multimodal Attentive Contrastive Learning Framework

Habibeh Naderi (Dalhousie University) ✉; Behrouz Haji Soleimani (Kinaxis); Stan Matwin (Dalhousie University)

11:36 65 Exploring Superposition and Interference in State-of-the-Art Low-Parameter Vision Models

Lilian Hollard (LICIIS) ✉

11:54 127 Taxonomic Reasoning for Rare Arthropods: Combining Dense Image Captioning and RAG for Interpretable Classification

Nathaniel Lesperance (University of Guelph) ✉; Sujeevan Ratnasingham (Centre for Biodiversity Genomics); Graham Taylor (University of Guelph)

12:12 184 Contextual Attention-Based Multimodal Fusion of LLM and CNN for Sentiment Analysis

Meriem Zerkouk (University of TELUQ) ✉; Miloud Mihoubi (University of TELUQ); Belkacem Chikhaoui (University of TELUQ)

14:00 — 15:00 Graduate Students Symposium

15:30 — 17:00 Session 9 - Short Papers POSTERS

Room TI Gallery

53 Continual Prediction Learning Techniques to Support Users' Grasp Selection on a Multi-Articulating Prosthetic Hand
Annette Lau (University of Alberta) ✉; Michael R. Dawson (University of Alberta); Patrick M. Pilarski (University of Alberta)

56 3D Gaussian Splatting and Camera Poses Joint Optimization for Motion Blur Images via Low-pass Filter
Xuanqi Zhang (University of Ottawa) ✉; Wonsook Lee (University of Ottawa); Chris Joslin (Carleton University)

68 How Robust Are Higher-Order Graph Neural Networks to Backdoor Attacks?
Abhijeet Dhali (Brock University) ✉; Renata Dividino (Brock University)

79 Analysis of Canadian Wildfire Tweets Over Seven Years
Braeden Sherritt (Carleton University); Isar Nejadgholi (The National Research Council Canada); Marzieh Amini (Carleton University) ✉

121 Evaluating the Effectiveness of Cost-Efficient Large Language Models in Benchmark Biomedical Tasks
Israt Jahan (York University); Md Tahmid Rahman Laskar (Dialpad) ✉; Chun Peng (York University); Jimmy Huang (York University)

123 A Context-Aware LLM-Based Action Safety Evaluator for Automation Agents
Chia-Hao Lin (New York Institute of Technology); Amin Milani Fard (New York Institute of Technology) ✉

131 Vectorized Context-Aware Embeddings for GAT-Based Collaborative Filtering
Danial Ebrat (University of Windsor) ✉; Sepideh Ahmadian (University of Windsor); Luis Rueda (University of Windsor)

146 SF2D: Semi-supervised Federated Learning for Fall Detection using (Un)labelled Data in Edge-Cloud
Seyed Alireza Rahimi Azghadi (University of New Brunswick) ✉; Hung Truong Nguyen Thanh (University of New Brunswick); Irina Kondratova (NRC); Hélène Fournier (NRC); Monica Wachowicz (RMIT); francis palma (University of New Brunswick); René Richard

(NRC); Hung Cao (University of New Brunswick)

153 Discovering and Evaluating Politeness Editing Strategies

Ahmad Aljanaideh (Bentley University) ✉; Saeb Ganideh (Toronto Metropolitan University); Michael Pumphrey (University of Guelph); Mohammad Al Janaideh (University of Guelph)

189 Comparing Traditional and Deep Learning Approaches for Product Matching: Performance on Unseen Entities

Jeremy Foxcroft (University of Guelph) ✉; Eric Sartor (University of Guelph); Luiza Antonie (University of Guelph)

191 A Minimalist Swarm Robotic Controller for Foraging

Andrew Vardy (Memorial University of Newfoundland) ✉

195 Cardioformer: Advancing AI in ECG Analysis with Multi-Granularity Patching and ResNet

Md Kamrujjaman Mobin (Shahjalal University of Science and Technology, Sylhet.) ✉; Md Saiful Islam (Athabasca University, Canada); Sadik Al Barid (Shahjalal University of Science and Technology, Sylhet.); Md Masum (Shahjalal University of Science and Technology, Sylhet.)

197 From Control to Flourishing: Responsible Generative AI and the Limits of Meaningful Human Control

Tugba Yoldas (University of Alberta) ✉

202 Intra-Layer Recurrence in Transformers for Language Modeling

Anthony Nguyen (Algoma University); Wenjun Lin (Algoma University) ✉

Thursday, 29 May 2025

11:00 — 12:30 Session 10 - Explainability, Interpretability, Ethics and Safe AI

Room 160
Chair: TBA

11:00 4 Topology-Driven Solver Selection for Stochastic Shortest Path MDPs via Explainable Machine Learning

Mathieu Gravel (Université du Québec à Montréal); Jaël Champagne Gareau (Université du Québec à Montréal) ✉

11:18 42 Enhancing Legal Text Entailment: Evaluating Model Architectures, Training Approaches, and Interpretability

Michel Custeau (University of Ottawa) ✉; Diana Inkpen (University of Ottawa)

11:36 48 XGD: Explainable AI-Guided Knowledge Distillation with Feature Refinement for Semantic Segmentation

Hung Nguyen (University of New Brunswick) ✉; Khang Nguyen (FPT Software); Binh Truong (FPT Software); Khanh Nguyen (FPT Software); Loc Nguyen (Friedrich-Alexander-Universität Erlangen-Nürnberg); Francis Palma (University of New Brunswick); Hung Cao (University of New Brunswick)

11:54 108 Faithful Perturbations and Evaluations for Post-Hoc Local Explanation Methods

Iain Smith (University of Alberta) ✉; Osmar Zaiane (University of Alberta)

12:12 130 Ethical Risk Assessment of the Data Harnessing Process of LLM supported on Consensus of Well-known Multi-Ethical Frameworks

Javed KHAN (Kent State University) ✉; Sharmila Rahman Prithula (Kent State University)

14:00 — 15:00 Session 11 - Machine Learning and Interpretability

Room 160
Chair: TBA

14:00 32 Meta-Unsupervised Representation Learning: A New Approach to Factorization and Interpretability

Ameer Ahmed Khan (Bishop's University) ✉; Rachid Hedjam (Bishop's University); Mebarka Allaoui (Bishop's University); Guoqiang Zhong (Ocean University of China)

14:20 41 Unsupervised Feature Selection Using Orthogonally Constrained Matrix Factorization with Hessian Regularization and Non-Convex Sparsity

Zubeka Dang (Seneca Polytechnic); Anna Jazayeri (Seneca Polytechnic); Ran Arino (Seneca Polytechnic); Anna Briskina (Seneca Polytechnic); Amir Moslemi (Sunnybrook research institute; Department of physics, Toronto Metropolitan university) ✉

14:40 [196] Discrete-Survival Compatibility Score for Donor-Recipient Matching in Liver Transplantation

Yingke Wang (University of Waterloo) ✉; Eunice Tan (University Health Network); Yingji Sun (University Health Network); Mamatha Bhat (University Health Network); Xi He (University of Waterloo, Vector Institute); Sirisha Rambhatla (University of Waterloo)

15:30 — 16:24 Session 12 - Applications III - Financial and Cryptocurrency Market Applications

Room 160
Chair: TBA

15:30 [18] A Domain-Specific Transformer Approach for Financial Statement Fraud Detection

Matin N. Ashtiani (University of Ottawa) ✉; Shanzi Rui (University of Ottawa); Bijan Raahemi (University of Ottawa)

15:48 [119] Financial Market Prediction using Contrastive Learning-based News Representation and Multi-Resolution Market Data

Saeede Anbaee Farimani (Mashhad Branch Islamic Azad University); Majid Vafaei Jahan (Mashhad Branch Islamic Azad University); Pouya Soltani (Mashhad Branch Islamic Azad University); Amin Milani Fard (New York Institute of Technology) ✉

16:06 [125] Enhancing Cryptocurrency Price Prediction by Applying Temporal Fusion Transformers on Subseries

Arash Peik (Yazd University); Mohammad Ali Zare Chahooki (Yazd University); Amin Milani Fard (New York Institute of Technology) ✉; Mehdi Agha Sarram (Yazd University)

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