

MONDAY, 5 JUNE

Graduate Student Symposium (AM) & Industry Track (PM)

Graduate Student Symposium

08:45–09:00: Coffee on arrival, registration

09:00–09:05: Welcome

09:05–09:35: Keynote Talk: [Marwa El Halabi](#)

09:35–10:10: Spotlight Talks

09:35–09:42 Spotlight Talk: *Exploring the Impact of Representation on Agent Learning*

- Callaghan Wilmott

09:42–09:49 Spotlight Talk: *Graph learning with programmatic weak supervision -*

Pratheeksha Nair

09:49–09:56 Spotlight Talk: *A Communication-Efficient Protocol for Federated*

Learning in Energy Storage Systems - Xu Wang, Yuehan Qi, Yuanzhu Chen and

Octavia Dobre

09:56–10:03 Spotlight Talk: *Counterfactual Explanations for Rankings - Mozghan*

Salimiparsa

09:03–10:10 Spotlight Talk: *A Comprehensive Framework for the Development of*

Ethical Machine Learning in Medicine - Emily Medema

10:10–10:30: Poster Session

From Development to Dissemination: Social and Ethical Issues with Text-to-Image AI-Generated Art - Sharon Chee Yin Ho

An Explainable Deep Few-shot Network for Protein Family Classification - Saeedeh Jamali, Yogendra Chaubey and Ashkan Ebadi

When does Continuous Learning for BERT make sense? - Zachary Yang

Better Bridges Between Model and Real World - Kellin Pelrine

InDeSTra – system for interior design style transfer - Mateusz Ogrodowczyk, Joanna Kurczalska and Jakub Eichner

Heuristic Restart Methods for Optimal Surgery Scheduling - Daria Maltseva

Machine Learning for Hotel Booking Cancellations Prediction - Vicky Kuo

Prediction of Sustaining Emerging Technology Terms Using Burst Detection and Deep Learning - Ali Ghaemmaghmi, Andrea Schiffauerova and Ashkan Ebadi

10:30–10:45: Morning Coffee

10:45–11:10: Spotlight Talks

10:45–10:52 Spotlight Talk: *Prediction of Sustaining Emerging Technology Terms Using Burst Detection and Deep Learning* - Ali Ghaemmaghmi, Andrea Schiffauerova and Ashkan Ebadi

10:52–10:59 Spotlight Talk: *Network Analysis and Vessel Flow Prediction for Risk Assessment of Biological Invasion of Non-indigenous Aquatic Species* - Ruixin Song

10:59–11:06 Spotlight Talk: *Sazia Mahfuz An Empirical Analysis on Pattern Reconstruction for Storage Reduction of Wearable Sensor Data* - Sazia Mahfuz

11:10–11:40: Keynote Talk: [Adriana Romero Soriano](#)

11:40–12:00: Panel discussion on Academia and Industry: **Adriana Romero Soriano & Marwa El Halabi & AJung Moon**

12:00–13:00: Lunch

Industry Track

13:05–13:30: Keynote Talk by David Beach

13:35–15:00: Spotlight Talks

13:35–14:00 Spotlight Talk: *Towards determining the criticality of AI applications: A model risk management perspective* - Bahar Sateli, Fernanda Del Castillo and Rod Moshtagi

14:05–14:30 Spotlight Talk: *Human + AI: How to unlock critical industrial applications* - Avishek Paul, Yimeng Gao and Ary Bressane

14:35–15:00 Spotlight Talk: *Anomaly Detection and Explanation of Wind Turbine Main Bearings using Autoencoder and Bayesian Network Models* - Ahmed Mabrouk

15:00–15:15: Coffee

15:20–15:25: Poster Session: Elevator Pitches

15:30–16:00: Poster Session

Development of a Machine Learning Based Low-Cost Real Time Non-Contact Health Monitoring System for Rotary Machinery - Deepam Goyal, Tarun Goyal, Jujhar Singh, Shubham Sharma, S.S. Dhama, B.S. Pabla and Balkar Singh

Towards an Automated Framework of Root Cause Analysis in the Canadian Telecom Industry - Dalia Shanshal

Fuzzy Logic-Based Neural Networks in Finance: Knowledge Discovery and Explainability - Alexey Rubtsov

16:05–17:00: Panel discussion on Critical AI in Industry

Tuesday, 6 June 2023

CANADIAN AI - DAY 1

09:00–09:05: Opening Remarks

09:05–10:30: Keynote by [Jimmy Lin](#)

10:30–10:45: Coffee

10:45–12:00: Long paper session 1 (AI-L1) (NN-1)

10:45–11:10 *Improved Techniques for Training Tabular GANs Using Cramer's V Statistics* - Melle Mendikowski, Benjamin Schindler, Thomas Schmid, Ralf Möller and Mattis Hartwig

11:10–11:35 *PAC-Bayesian Learning of Aggregated Binary Activated Neural Networks with Probabilities over Representations* - Louis Fortier-Dubois, Benjamin Leblanc, Gaël Letarte, François Laviolette and Pascal Germain

11:35–12:00 *Upward Pass Semantics in Arithmetic Circuit Inference* - Cory Butz, Jhonatan Oliveira, André dos Santos, Anna Norris and Kadence Meredith

12:00–13:00: Lunch

13:00–14:15: Long paper session 2 (AI-L2) (APP-1)

13:00–13:25 *Supervised recommendations of gas metal arc welding parameters* - Tom Picherit, Louis-Philip Lampron, Michael Morin, Gabriel Caron-Guillemette and Jonathan Gaudreault

13:25–13:50 *Optimizing DNNs Model Partitioning for Enhanced Performance on Edge Devices* - Md Al Maruf and Akramul Azim

13:50–14:15 *Target-learning the latent space of a variational autoencoder model for the inverse design of stable perovskites* - Ericsson Chenebuah, Michel Nganbe and Alain Tchagang

14:15–15:00: Long paper session 3 (AI-L3) (NLP-1)

14:15–14:38 *ChartSumm: A Comprehensive Benchmark for Automatic Chart*

Summarization of Long and Short Summaries - Raian Rahman, Rizvi Hasan, Abdullah Al Farhad, Md Tahmid Rahman Laskar, Md. Hamjajul Ashmafee and Dr. Abu Raihan Mostofa Kamal

14:38–15:00 *Don't Worry Accountants, ChatGPT Won't Be Taking Your Job...Yet* - Stacey

Taylor and Vlado Keselj

15:00–15:15: Coffee

15:15–16:00: Long paper session 4 (AI-L4) (CL-RL-1)

15:15–15:38 *Mimicking Electronic Gaming Machine Player Behavior using Reinforcement*

Learning - Gaurav Jariwala and Vlado Keselj

15:38–16:00 *Elucidating Transition State Behaviour from Mobility Data by Cascades of*

Markov Chains - Michiel Dhont and Elena Tsiorkova

16:00–17:00: Long paper session 5 (AI-L5) (SEC-1)

16:00–16:20 *Detecting Malicious .NET Files Using CLR Header Features and Machine*

Learning - Mohammed Hassan, Mohamed Eid, Hossam Elnems, Eslam Ahmed, Ebraam Mesak and Paula Branco

16:20–16:40 *TAVo: Tor Application detection with Voting critic* - Gautam Vira, Samik Pal,

Behdad Mansouri, Amirhossein Ghadami and Paula Branco

16:40–17:00 *An Empirical Study on Vagueness Detection in Privacy Policy Texts* - Garima

Malik, Savas Yildirim, Mucahit Cevik and Ayse Bener

Wednesday, 7 June 2023

CANADIAN AI – DAY 2

09:00–09:05: Opening Remarks

09:05–10:30: Keynote by [Alona Fyshe](#)

10:30–10:45: Coffee

10:45–12:00: Long paper session 6 (AI-L6) – Best Paper Awards Session

10:45–11:10 *MultiStream EvolveCluster* - Christian Nordahl, Veselka Boeva and Håkan Grahm

11:10–11:35 *Exploring Preferential Label Smoothing for Neural Network-based Classifiers* - Paritosh Goyal, Chenyang Huang, Amine Trabelsi and Osmar Zaiane

11:35–12:00 *RISC: Generating Realistic Synthetic Bilingual Insurance Contract* - David Beauchemin and Richard Khoury

12:00–13:00: Lunch

13:00–14:15: Panel discussion

Future of AI: Trends, Challenges and Prospects - Dr. Karim Ali (Invision AI), Dr. James Elder (York University), Dr. Alona Fyshe (University of Alberta) and Dr. Anna Koop (Google DeepMind)

14:15–15:00: Short paper talk session 1 (A1 - S1)

Navitas/Optimus: A Novel Computational Tool for enhanced CRISPR/Cas Genome Editing
- Amirhossein Daneshpajouh, Megan Fowler and Kay C. Wiese

Identifying the Factors Influencing IPO Underpricing using Explainable Machine Learning Techniques - Davood Pirayesh Neghab, Mucahit Cevik and Ayse Basar

Unsupervised Financial Fraud Detection Using Low-rank Recovery - Jingjing Zheng, John Hawkin, Charles Robertson, Alexander Howse, Yuanzhu Chen and Xianta Jiang

Joint Trust for Belief Revision - Aaron Hunter and Richard Booth

Machine learning for the prediction of safe and biologically active organophosphorus molecules - Hang Hu, Hsu Kiang Ooi, Mohammad Sajjad Ghaemi and Anguang Hu

Parameter-Efficient Methods for Metastases Detection from Clinical Notes - Maede Ashofteh Barabadi, Wai Yip Chan, Xiaodan Zhu, Richard Kinh Do and Amber L. Simpson

I3D Light - A Simple Motion Information Stream for I3D - Ruikang Luo, Francois Rivest and Farhana Zulkernine

Stock Market Prediction from Sentiment and Financial Stock Data Using Machine Learning - Mohammad Al Ridhawi and Hussein Al Osman

IsoGloVe: A New Count-based Graph Embedding Method based on Geodesic Distance - Sepideh Nahali, Leila Safari, Alireza Khanteymooori, Hajer Ayadi and Jimmy Huang

Meta-GCN: A Dynamically Weighted Loss Minimization Method for Dealing with the Data Imbalance in Graph Neural Networks - Mahdi Mohammadizadeh, Arash Mozhdehi, Yani Ioannou and Xin Wang

15:00–15:15: Coffee

15:15–17:00: Short paper poster presentation 1 (AI-SP1) Posters

18:00–22:00: Dinner

Thursday, 8 June 2023

CANADIAN AI – DAY 3

09:00–09:05: Opening Remarks

09:05–10:30: Awards Talk

Best MSc Thesis Award: *Non-Autoregressive Unsupervised Summarization with Length-Control Algorithms* - Puyuan Liu

Best PhD Thesis Award: *Multi-Agent Reinforcement Learning in Large Complex Environments* - Sriram Ganapathi Subramanian

Lifetime Achievement Award: *Dr. Richard Zemel*

10:30–10:45: Coffee

10:45–12:00: Long paper session 7 (AI-7) (HCG-1)

10:45–11:10 *GUILGET: GUI Layout GEneration with Transformer* - Andrey Sobolevsky, Guillaume-Alexandre Bilodeau, Jinghui Cheng and Jin L.C. Guo

11:10–11:35 *Looking the Part: The AI Zombie Problem and the Anti-Turing Test* - Julien da Silva

11:35–12:00 *Improving Software Requirements Prioritization through the Lens of Constraint Satisfaction* - Jonathan Winton and Francis Palma

12:00–13:00: Lunch

13:00–14:10: Long paper session 8 (AI-L8) (CV-1)

13:00–13:25 *Adaptive Kernel by Layer-wise Convolution* - Sahan Ahmad and Aminul Islam

13:25–13:48 *Quantifying Path Smoothness in Video Object Tracking by Detection* - Mohammed Gasmallah, Francois Rivest, Farhana Zulkernine and Mélanie Breton

13:48–14:10 *Liver Segmentation in Ultrasound Images Using Self-Supervised Learning with Physics-inspired Augmentation and Global-Local Refinement* - Abder-Rahman Ali, Peng Guo and Anthony E. Samir

14:10–15:00: Long paper session 9 (AI-L9)(NLP-2)

14:10–14:35 *Radar de Parité: An NLP system to measure gender representation in French news stories* - Valentin-Gabriel Soumah, Prashanth Rao, Philipp Eibl and Maite Taboada

14:35–15:00 *Multihop Factual Claim Verification Using Natural Language Prompts* - Md Mezbaur Rahman, Mohammed Saidul Islam, Md Tahmid Rahman Laskar, Md Azam Hossain and Abu Raihan Mostofa Kamal

15:00–15:15: Coffee

15:15–16:00: Long paper session 10 (AI-L10) (NLP-3)

15:15–15:30 *Towards improving text classification tasks based on knowledge graphs for limited labeled data* - Hongzhi Zhang and Omair Shafiq

15:30–15:45 *Personality Trait Detection using an Hierarchy of Tree-transformers and Graph Attention Network* - Sudipta Singha Roy, Robert Mercer and Souvik Kundu

15:45–16:00 *Few shot learning approaches to essay scoring* - Robert Helmecezi, Savas Yildirim, Mucahit Cevik and Sojin Lee

16:00–16:10: Q/A SESSION

16:10–16:55: Long paper session 11 (AI-L11) (REP-1)

16:10–16:25 *Guided Learning of Human Sensor Models with Low-Level Grounding* - Paul Quinlan, Qingguo Li and Xiaodan Zhu

16:25–16:40 *PCA-Enhanced Autoencoders for Nonlinear Dimensionality Reduction in Low Data Regimes* - Muhammad Al Digeil, Yuri Grinberg, Daniele Melati, Jens H. Schmid, Pavel Cheben, Siegfried Janz and Dan-Xia Xu

16:40–16:55 *Learning to Recognize Reachable States from Visual Domains* - Ella Morgan and Christian Muise

Responsible AI @ CANADIAN AI – DAY 3

Thursday, 8 June 2023

09:00–09:05: Opening Remarks

09:05–10:30: Meet and Greet

10:30–10:45: Coffee and feature talks

10:45–11:45: Keynote by [Emily Denton](#)

11:45–12:15: Student Posters Presentation

12:00–13:00: Lunch

13:00–14:05: Two Talks: [Allison Marchildon](#) and [Natalie Mayerhofer](#)

14:05–15:00: Two Talks: [Nathalie de Marcellis-Warin](#) and [Samira Abbasgholizadeh-Rahimi](#)

15:00–15:15: Coffee

15:15–17:00: Students' "3-minute thesis"

Responsible AI @ CANADIAN AI – DAY 3

Friday, 9 June 2023

09:00–09:05: Opening Remarks

09:05–09:45: Talk: [Benjamin Fung](#)

09:45–10:30: Talk: [Jacob Jaremko](#)

10:30–10:45: Coffee

10:45–12:00: Responsible AI Panel ([Valentine Goddard](#), [Alexander Scott](#), [Gagan Gill](#), [Sasha Luccioni](#), [Allison Cohen](#), [Richard Khoury](#))

12:00–13:00: Lunch

13:00–15:00: Tutorial: Privacy as hypothesis testing: linking Differential Privacy, membership attacks, and privacy audits

15:00–15:15: Coffee

15:15–16:00: Tutorial (continued) - Privacy as hypothesis testing: linking Differential Privacy, membership attacks, and privacy audits