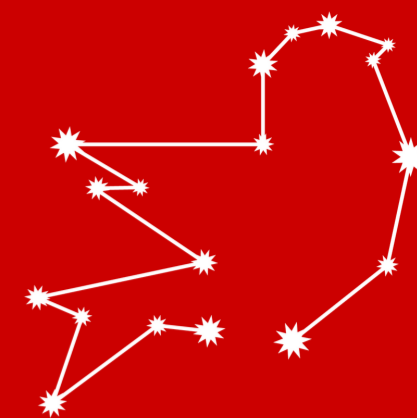# MCGILL UNIVERSITY

World renowned researchers & cutting-edge work in artificial intelligence
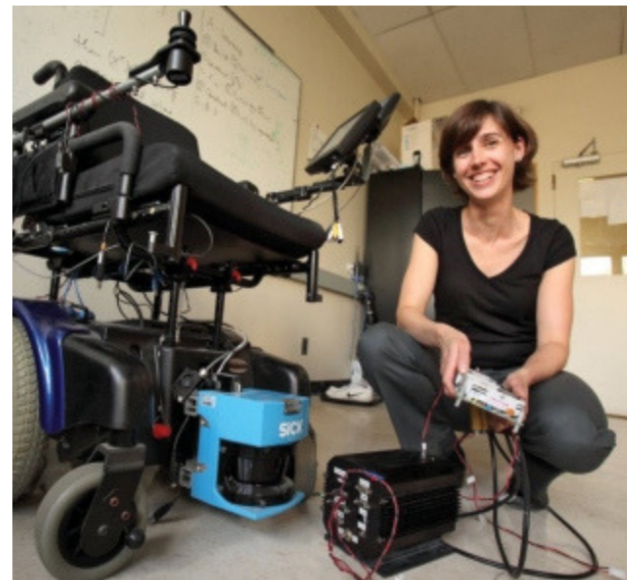
Reasoning and Learning Lab

About

- A world leader in machine learning (ML), McGill has a unique strength in reinforcement learning (RL) and natural language processing (NLP).
- With 60 graduate students in the Lab, McGill has tremendous breadth in terms of applications of ML/AI into many practical areas, such as robotics, dialog systems, and health care.
- The co-directors of the Lab, Doina Precup (RL), Joelle Pineau (RL and robotics), Jackie Cheung (NLP), and Prakash Panagaden (theory of probabilistic systems), are well recognized as international leaders in their field.
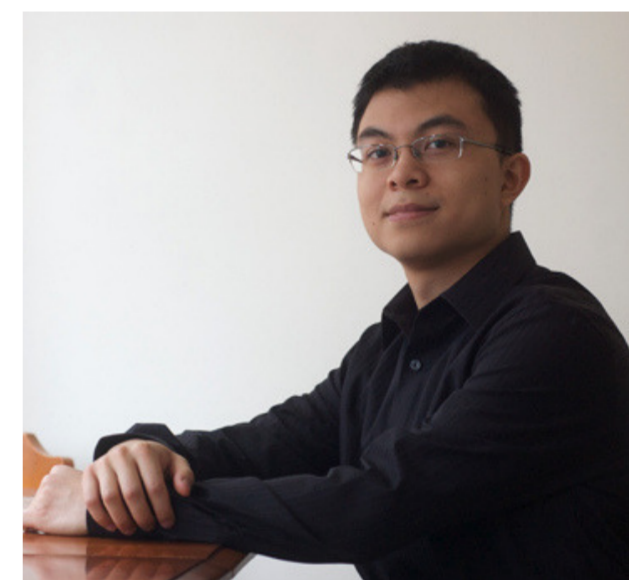
People

Doina Precup is a Professor in the School of Computer Science, and holds a Canada Research Chair in Machine Learning (Tier I). She is also a senior member of the Association for Advancement of Artificial Intelligence (AAAI).

Joelle Pineau is a Professor in the School of Computer Science, and a Senior Fellow of the CIFAR program on Learning in Machines & Brains. She is a recipient of the Principal's Prize for Outstanding Emerging Researchers (2015), and the Tomlinson Scientist Award (2015). She is also the incoming President (2017-2020) of the International Machine Learning Society

Jackie Cheung is currently an Assistant Professor in the School of Computer Science at McGill. He is also the Co-chair of the 2017 Conference on Empirical Methods on Natural Language Processing.

School of Computer Science professors active in research areas which either use AI/ML methods, or have related research interests:

People

- **Professor Mathieu Blanchette**: Bioinformatics
- **Professor Yang Cai**: Game Theory
- **Professor Xiao-wen Chang**: Numerical Methods
- **Professor Luc Devroye**: Theory
- **Professor Laurie Hendren**: Data Mining
- **Professor Bettina Kemme**: Databases; Distributed Computing

- **Professor Xue Liu**: Data Mining
- **Professor Muthucumaru Maheswaran**: Distributed Computing; Social Networks
- **Professor Derek Ruths**: Network Science
- **Professor Adrian Vetta**: Game Theory
- **Professor Jerome Waldispuhl**: Bioinformatics

The members and alumni of the Reasoning and Learning Lab are connected across the globe

Research Centre for Intelligent Machines (CIM)

About

- CIM has operated for more than 40 years as an interdisciplinary collaboration and research group.
- Today, there are 20 professors in the Centre with 150+ student researchers, many working in the area of applied and theoretical artificial intelligence.

CIM members and alumni have been involved with more than 30 companies over its 40+ year existence.

People

- **Professor Tal Arbel**: Computer Vision; Medical Image Analysis
- **Professor Peter Caines**: Hybrid Systems Control; Mean-Field Games
- **Professor James Clark**: Computer Vision; Video; Intelligent Displays
- **Professor Jeremy Cooperstock**: Human-Computer Interfaces
- **Professor Greg Dudek**: Field robotics, Autonomous vehicles
- **Professor Frank Ferrie**: Computer Vision; Human-Robot Interaction
- **Professor Paul Kry**: Computer Graphics; Physical Modeling; Robot Art
- **Professor Mike Langer**: Computer Vision
- **Professor Martin Levine**: Computer Vision; Sports Video Analysis
- **Professor Aditya Mahajan**: Decentralized Control; MachineLearning
- **Professor David Meger**: Field robotics; Human-Robot Interaction
- **Professor Joëlle Pineau**: Machine Learning; Assistive Robotics
- **Professor Kaleem Siddiqi**: Computer Vision; Medical Image Analysis