

WILLIAM L HAMILTON

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ACADEMIC POSITIONS	Assistant Professor , School of Computer Science Canada CIFAR Chair in AI <i>McGill University</i> , Montreal, QC, Canada <i>Mila AI Institute of Quebec</i> , Montreal, QC, Canada	<i>January 2019 - present</i> <i>January 2019 - present</i>
EDUCATION	PhD in Computer Science <i>Stanford University</i> , Stanford, CA, USA Advisors: Dan Jurafsky and Jure Leskovec Thesis: Representation Learning Methods for Computational Social Science Recipient of the 2018 Arthur Samuel Doctoral Thesis Award	<i>Graduated: September 2018</i>
	MSc in Computer Science <i>McGill University</i> , Montreal, QC, Canada Advisor: Joelle Pineau Thesis: Compressed Predictive State Representation Recipient of the 2014 Canada AI Association MSc Thesis Award	<i>Graduated: October 2014</i>
	BSc in Computer Science <i>McGill University</i> , Montreal, QC, Canada Honourable Mention for the 2013 ACM Undergraduate Researcher of the Year	<i>Graduated: May 2013</i>
RELEVANT INDUSTRY EXPERIENCE	Scientific Advisor , <i>IVADO Labs, Montreal, QC</i> <ul style="list-style-type: none">• Technical consulting for large companies regarding the deployment of AI strategies for supply chain, forecasting, and operations.• Specialize in projects related to demand forecasting and natural language processing.• Several successful projects generating millions in new revenue.	<i>September 2019 – present</i>
	Scientific Advisor , <i>Relation Therapeutics, London, UK</i> <ul style="list-style-type: none">• Scientific advisor for computational drug repurposing.• Provide expert advice on graph neural network (GNN) techniques.	<i>March 2020 – present</i>
	Visiting Researcher , <i>Facebook AI Research, Montreal, QC</i> <ul style="list-style-type: none">• Developed new algorithms for graph representation learning, natural language processing, and reinforcement learning.	<i>September 2018 – September 2019</i>
	Research Scientist , <i>Amazon Inc., Seattle, WA</i> <ul style="list-style-type: none">• Worked on demand forecasting for Amazon Web Services (AWS).• Implemented a novel framework for modeling customer demand.	<i>June 2014 – August 2014</i>

Key metrics: 6500+ citations, h-index=21

Books

1. W. L. Hamilton. Graph Representation Learning. *Morgan & Claypool*. 2020.

Peer-reviewed conference proceedings

29. A. Adhikari, X. Yuan, M. A. Côté, M. Zelinka, M. A. Rondeau, R. Laroche, P. Poupart, Jian Tang, A. Trischler, and W. L. Hamilton. Learning Dynamic Belief Graphs to Generalize on Text-Based Games. *Neural Information Processing Systems (NeurIPS)*. 2020.
28. A. J. Bose, G. Gidel, H. Berard, A. Cianflone, P. Vincent, S. Lacoste-Julien, and W. L. Hamilton. Adversarial Example Games. *Neural Information Processing Systems (NeurIPS)*. 2020.
27. J. Dong, M. A. Rondeau, and W. L. Hamilton. Distilling Structured Knowledge for Text-Based Relational Reasoning. *Empirical Methods in Natural Language Processing (EMNLP)*. 2020.
26. J. Wu, M. Cao, J. Cheung, and W. L. Hamilton. TeMP: Temporal Message Passing for Temporal Knowledge Graph Completion. *Empirical Methods in Natural Language Processing (EMNLP)*. 2020.
25. K. Ahrabian, A. Feizi, Y. Salehi, W. L. Hamilton, and A. J. Bose. Structure Aware Negative Sampling in Knowledge Graphs. *Empirical Methods in Natural Language Processing (EMNLP)*. 2020.
24. K. Teru, E. Denis, and W. L. Hamilton. Inductive Relation Prediction by Subgraph Reasoning. *International Conference on Machine Learning (ICML)*. 2020.
23. A. J. Bose, A. Smofsky, R. Liao, P. Panangaden, W. L. Hamilton. Latent Variable Modelling with Hyperbolic Normalizing Flows. *International Conference on Machine Learning (ICML)*. 2020.
22. K. Sinha, P. Parthasarathi, J. Wang, R. Lowe, W. L. Hamilton, and J. Pineau. Learning an Unreferenced Metric for Online Dialogue Evaluation. *Association for Computational Linguistics (ACL)*. 2020.
21. Z. Yan, W. L. Hamilton, and M. Blanchette. Graph Neural Representational Learning of RNA Secondary Structures for Predicting RNA-Protein Interactions. *International Conference on Intelligent Systems for Molecular Biology (ISMB)*. 2020.
20. R. Liao, Y. Li, Y. Song, S. Wang, C. Nash, W. L. Hamilton, D. Duvenaud, R. Urtasun, and R. Zemel. Efficient Graph Generation with Graph Recurrent Attention Networks. *Neural Information Processing Systems (NeurIPS)*. 2019.
19. K. Sinha, S. Sodhani, J. Dong, J. Pineau, and W. L. Hamilton. CLUTRR: A Diagnostic Dataset Benchmark for Inductive Reasoning from Text. *Empirical Methods in Natural Language Processing (EMNLP)*. 2019.
18. C. Onu, J. Lebensold, W. L. Hamilton, and D. Precup. Neural Transfer Learning for Cry-based Diagnosis of Perinatal Asphyxia. *Interspeech*. 2019.
17. A. J. Bose, and W. L. Hamilton. Compositional Fairness Constraints for Graph Embeddings. *International Conference on Machine Learning (ICML)*. 2019.

16. P. Velickovic, W. Fedus, W. L. Hamilton, P. Lio, Y. Bengio, and R. D. Hjelm. Deep Graph Infomax. *International Conference on Learning Representations (ICLR)*. 2019.
15. C. Morris, M. Ritzert, M. Fey, W. L. Hamilton, J. Lenssen, G. Rattan, and M. Grohe. Weisfeiler and Leman Go Neural: Higher-order Graph Neural Networks. *Association for the Advancement of Artificial Intelligence (AAAI)*. 2019.
14. W. L. Hamilton, P. Bajaj, M. Zitnik, D. Jurafsky, and J. Leskovec. Embedding Logical Queries on Knowledge Graphs. *Neural Information Processing Systems (NeurIPS)*. 2018.
13. R. Ying, J. You, C. Morris, X. Ren, W. L. Hamilton, and J. Leskovec. Hierarchical Graph Representation Learning with Differentiable Pooling. *Neural Information Processing Systems (NeurIPS)*. 2018.
12. R. Ying, R. He, K. Chen, P. Eksombatchai, W. L. Hamilton, and J. Leskovec. Graph Convolutional Neural Networks for Web-scale Recommender Systems. *ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD)*. 2018.
11. J. You, R. Ying, X. Ren, W. L. Hamilton, and J. Leskovec. GraphRNN: Generating Realistic Graphs with Deep Auto-regressive Models. *International Conference on Machine Learning (ICML)*. 2018.
10. S. Kumar, W. L. Hamilton, D. Jurafsky, and J. Leskovec. Community Interaction and Conflict on the Web. *The Web Conference (WWW)*. 2018.
9. W. L. Hamilton*, R. Ying*, and J. Leskovec. Inductive Representation Learning on Large Graphs. *Neural Information Processing Systems (NIPS)*. 2017.
8. W. L. Hamilton*, J. Zhang*, C. Danescu-Niculescu-Mizil, D. Jurafsky, and J. Leskovec. Loyalty in Online Communities. *AAAI International Conference on Web and Social Media (ICWSM)*. 2017. (Short paper).
7. J. Zhang*, W. L. Hamilton*, C. Danescu-Niculescu-Mizil, D. Jurafsky, and J. Leskovec. Community Identity and User Engagement in a Multi-Community Landscape. *AAAI International Conference on Web and Social Media (ICWSM)*. 2017.
6. W. L. Hamilton, K. Clark, J. Leskovec, and D. Jurafsky. Inducing Domain-Specific Sentiment Lexicons from Unlabeled Corpora. *Empirical Methods in Natural Language Processing (EMNLP)*. 2016.
5. W. L. Hamilton, J. Leskovec, and D. Jurafsky. Cultural Shift or Linguistic Drift? Comparing Two Computational Measures of Semantic Change. *Empirical Methods in Natural Language Processing (EMNLP)*. 2016.
4. W. L. Hamilton, J. Leskovec, and D. Jurafsky. Diachronic Word Embeddings Reveal Statistical Laws of Semantic Change. *Association for Computational Linguistics (ACL)*. 2016.
3. V. Prabhakaran, W. L. Hamilton, D. McFarland, and D. Jurafsky. Predicting the Rise and Fall of Scientific Topics from Trends in their Rhetorical Framing. *Association for Computational Linguistics (ACL)*. 2016. See also: <https://science-surveyor.github.io/>
2. B. Balle*, W. L. Hamilton*, and J. Pineau. Methods of Moments for Learning Stochastic Languages: Unified Presentation and Empirical Comparison. *International Conference on Machine Learning (ICML)*. 2014.

1. W. L. Hamilton, M.M. Fard, and J. Pineau. Modelling Sparse Dynamical Systems with Compressed Predictive State Representations. *International Conference on Machine Learning (ICML)*. 2013.

Journal articles

4. C. Oliver, V. Mallet, R. Gendron, V. Reinharz, W. L. Hamilton, N. Moitessier, and J. Waldispühl. Extended RNA base pairing networks imprint small molecule binding preferences. *Nucleic Acids Research*. 2020.
3. W.L. Hamilton, R. Ying, and J. Leskovec. Representation Learning on Graphs: Methods and Applications. *IEEE Data Engineering Bulletin*. 2017.
2. R. Voigt, N. P. Camp, V. Prabhakaran, W. L. Hamilton, R. C. Hetey, C. M. Griffiths, D. Jurgens, D. Jurafsky, and J. L. Eberhardt. Language from Police Body Camera Footage Shows Racial Disparities in Officer Respect. *Proceedings of the National Academy of Sciences (PNAS)*. 2017. **Winner of 2017 Cozzarelli Prize**.
1. W. L. Hamilton, M.M. Fard, and J. Pineau. Efficient Learning and Planning with Compressed Predictive States. *Journal of Machine Learning Research*. 2014.

Peer-reviewed workshop contributions

16. A. Adhikari, A. Ram, R. Tang, W. L. Hamilton, and J. Lin. Exploring the Limits of Simple Learners in Knowledge Distillation for Document Classification with DocBERT. *Association for Computational Linguistics (ACL) Workshop on Representation Learning for Natural Language Processing*. 2020.
15. K. Sinha, S. Sodhani, J. Pineau, and W. L. Hamilton. Evaluating Logical Generalization in Graph Neural Networks. *Neural Information Processing Systems (NeurIPS) Workshop on Lifelong Learning*. 2020.
14. A. Gupta*, A. Słowik*, W. L. Hamilton, M. Jamnik, S. B. Holden, and C. Pal. Analyzing Structural Priors in Multi-Agent Communication. *Workshop on Adaptive and Learning Agents at the International Conference on Autonomous Agents and Multiagent Systems (AAMAS)*. 2020.
13. A. Słowik, A. Gupta, W. L. Hamilton, M. Jamnik, S.B. Holden. Towards Graph Representation Learning in Emergent Communication. *Association for the Advancement of Artificial Intelligence (AAAI), Workshop on Reinforcement Learning in Games*. 2020.
12. K. Teru and W.L. Hamilton. Disentangling structure and position in graphs. *Neural Information Processing Systems (NeurIPS) Graph Representation Learning Workshop*. 2019.
11. J. Lebensold, W. L. Hamilton, and B. Balle, and D. Precup. Actor Critic with Differentially Private Critic. *Neural Information Processing Systems (NeurIPS) Privacy in Machine Learning Workshop*.
10. A. J. Bose, A. Cianflone and W. L. Hamilton. Graph Attacks with Latent Variable Noise Modeling. *Neural Information Processing Systems (NeurIPS), Graph Representation Learning Workshop*. 2019.
9. Meta-Graph: Few shot Link Prediction via Meta-Learning. A. J. Bose, A. Jain, P. Molino, and W. L. Hamilton. *Neural Information Processing Systems (NeurIPS), Graph Representation Learning Workshop*. 2019.

8. A. Cianflone, Z. Ahmed, R. Islam, A. .J. Bose, and W. L. Hamilton Discrete Off-policy Policy Gradients Using Continuous Relaxations *Reinforcement Learning and Decision Making (RLDM)*. 2019.
7. C. Onu, J. Lebensold, W. L. Hamilton, and D. Precup. Neural Transfer Learning for Cry-based Diagnosis of Perinatal Asphyxia. *International Conference on Learning Representations (ICLR), AI for Social Good Workshop*. 2019.
6. K. Sinha, S. Sodhani, W. L. Hamilton, and J. Pineau. Compositional Language Understanding with Text-based Relational Reasoning. *Neural Information Processing Systems (NeurIPS), Workshop on Relational Representation Learning*. 2019.
5. A. Bose and W. L. Hamilton. Fairness Constrains for Graph Embeddings. *Neural Information Processing Systems (NeurIPS), Workshop on Relational Representation Learning*. 2019.
4. J. You, R. Ying, C. Morris, X. Ren, W. .L. Hamilton, J. Leskovec. Hierarchical Graph Representation Learning with Differentiable Pooling. *KDD Deep Learning Day, Spotlight Presentation*. 2018.
3. A. Wang, W. L Hamilton, and J. Leskovec. Learning Linguistic Descriptors of User Roles in Online Communities. *Empirical Methods in Natural Language Processing, Workshop on Computational Social Science (EMNLP NLP+CSS)*. 2016.
2. W. L. Hamilton, J. Leskovec, and D. Jurafsky. Distributional Approaches to Diachronic Semantics (Extended Abstract). *Distributional Semantics and Linguistic Theory*. 2016.
1. W. L. Hamilton, M.M. Fard, and J. Pineau. Efficient Learning and Planning with Compressed Predictive States (Extended Abstract). *Reinforcement Learning and Decision Making Workshop (RLDM)*. 2013.

Tutorials

2. W. L. Hamilton, J. Tang. Graph Representation Learning. *Association for the Advancement of Artificial Intelligence (AAAI)*. 2019.
1. W. L. Hamilton, J. Leskovec, R. Ying, and R. Sasic. Representation Learning on Networks. *The Web Conference (WWW)*. 2018.

GRANTS

Total funding: \$10,115,800 Total share of funding: \$2,158,425 Time period: 2019-2023

**All values in CAD with estimated exchange rate at time of award.*

Canada CIFAR Chair in Artificial Intelligence 2019-2023

Amount: \$1,050,000, Role: PI, Share: 100%

Title: *Machine Learning for Computational Social Science*

Funding body: Canada Institute for Advanced Research (CIFAR)

NSERC Discovery Grant 2019-2023

Amount: \$165,000 Role: PI, Share: 100%

Title: *Representation Learning with Relational Data*

Funding body: Natural Sciences and Engineering Research Council of Canada (NSERC)

Omics Data Against Cancer Grant 2020-2022

Amount: \$300,000, Role: Co-PI, Share: 25% Title: *Deciphering Mechanisms of Epigenetic Alterations in Cancer using 3D-Genomics-Informed Deep Learning*

Funding body: Genome Quebec and L'Institut de Valorisation des Données (IVADO)

FRQNT Établissement de la Relève Professorale 2020-2021
Amount: \$50,800 Role: PI, Share: 100%
Title: *Apprentissage Automatique pour Transférer des Stratégies de Raisonnement Entre des Graphes de Connaissances*
Funding body: Fonds de Recherche Nature et Technologies (FRQNT)

Project RE: Coalition to Identify COVID-19 Therapeutic Candidates 2020
Amount: 1,690,000\$ Role: Scientific Advisor, Share: N/A
Lead Organizations: Relation Therapeutics and Mila - Quebec AI Institute
Funding body: Bill and Melinda Gates Foundation

Samsung-Mila Collaboration on Deep Learning 2020-2023
Amount: \$5,520,000 Role: Co-PI, Share: 8%
Lead PI: Prof. Yoshua Bengio
Funding body: Samsung

IBM-Mila Open Science Agreement 2020-2021
Amount: 250,000\$ Role: Co-PI, Share: 14%
Lead PI: Prof. Yoshua Bengio
Funding body: IBM

IVADO Fundamental Research Projects Grant 2020-2022
Amount: \$225,000 Role: Co-PI, Share: 33%
Title: *Unified Approach to Graph-Structure Utilization in Data Science*
Lead PI: Prof. Guy Wolf
Funding body: L'Institut de Valorisation des Données (IVADO)

IVADO Fundamental Research Projects Grant 2020-2022
Amount: \$225,000 Role: Co-PI, Share: 12.5%
Title: *Deciphering RNA Regulatory Codes and their Disease-Associated Alterations using Machine Learning*
Lead PI: Prof. Eric Lecuyer
Funding body: L'Institut de Valorisation des Données (IVADO)

FRQNT Projet de Recherche en Équipe 2020-2022
Amount: \$150,000 Role: Co-PI, Share: 25%
Title: *Cadre intelligent pour les réseaux ultra-denses-hétérogènes à l'épreuve de l'avenir : une vision pour l'émergence de la 6G*
Lead PI: Prof. Georges Kaddoum
Funding body: Fonds de Recherche Nature et Technologies (FRQNT)

MSR-Mila Collaboration Grant 2020-2021
Amount: \$50,000 Role: PI, Share: 100%
Title: *Meta Learning by Inducing Logical Rules*
Microsoft Research

CIFAR AI Catalyst Grant 2019
Amount: \$15,000 Role: Co-PI, Share: 25%
Title: *Leveraging Biomedical Knowledge Graphs for COVID-19 Drug Repurposing Strategies*
Lead PI: Prof. Jian Tang
Funding body: Microsoft Research

CFI John R. Evans Leadership Fund 2019-2020
Amount: \$300,000, Role: Co-PI, Share: 33%
Title: *Fast and Scalable Deep Learning for Sensitive Data in Social and Healthcare Contexts*
Lead PI: Prof. Yue Li

Funding body: Canada Foundation for Innovation (CFI)
MSR-Mila Collaboration Grant 2019-2020
 Amount: \$50,000 Role: PI, Share: 100%
 Title: *Learning and Reasoning with Graph Structures in Interactive Text Environments*
 Funding body: Microsoft Research

FELLOWSHIPS AND SCHOLARSHIPS	<p>SAP Stanford Graduate Fellowship (\$125,000) 2014-2018 Stanford University and SAP SE Inc.</p> <p>NSERC Doctoral Scholarship (PGS-D) (\$60,000) 2014-2017 Natural Sciences and Engineering Research Council of Canada (NSERC)</p> <p>Alexander Graham Bell Graduate Scholarship (CGS-D) (\$105,000, declined) 2014-2017 Natural Sciences and Engineering Research Council of Canada (NSERC)</p> <p>Alexander Graham Bell Graduate Scholarship (CGS-M) (\$17,500) 2013-2014 Natural Sciences and Engineering Research Council of Canada (NSERC)</p> <p>JW McConnell Scholarship (\$20,000) 2009 - 2013 McGill University</p> <p>Undergraduate Science Research Award (\$4,500) 2012 Natural Sciences and Engineering Research Council of Canada (NSERC)</p>
SELECTED AWARDS	<p>Arthur Samuel Doctoral Thesis Award 2018 Stanford University, Department of Computer Science</p> <p>Robert B. Cialdini Prize 2017 Society for Personality and Social Psychology</p> <p>Cozzarelli Prize (Best Paper Award) 2017 Proceedings of the National Academy of Sciences</p> <p>Outstanding Teaching Assistant Award 2016 Stanford Computer Science</p> <p>Canadian AI Association MSc Thesis Award 2014 Canadian AI Association (CAIAC)</p> <p>Undergraduate Researcher of the Year (Honourable Mention) 2013 Computing Research Association of North America</p>
ORGANIZATIONAL ACTIVITIES	<p>Co-organizer, <i>Montreal NLP Consortium</i> May 2019 - present (recurring) Hosted at the Mila AI Institute of Quebec, in collaboration with IVADO Quebec</p> <p>Co-organizer, <i>Differential Geometry Meets Deep Learning</i> December 2020 Co-located with the 2020 Neural Information Processing Systems</p> <p>Co-organizer, <i>Graph Representation Learning and Beyond Workshop</i> June 2020 Co-located with the 2020 International Conference on Machine Learning</p> <p>Lead Organizer, <i>Graph Representation Learning Workshop</i> December 2019 Co-located with the 2019 Neural Information Processing Systems</p> <p>Lead Organizer, <i>Representation Learning on Graphs and Manifolds Workshop</i> May 2019 Co-located with the 2019 International Conference on Learning Representations</p> <p>Co-organizer, <i>Deep Learning for Graphs Workshop</i> May 2019 Co-located with the 2019 SIAM Conference on Data Mining</p>

Co-organizer, *Workshop on Deep Learning on Graphs: Methods and Applications* August 2019
 Co-located with the 2019 Conference on Knowledge Discovery and Data Mining

EDITORIAL
 ACTIVITIES
 (JOURNALS)

Reviewing Editor, *Experimental Results* fall 2019 - present
 Cambridge University Press
 Role: Invite and manage reviewers in a sub-area; make final accept/reject decisions.

Editorial Board Reviewer, *Journal of Machine Learning Research* summer 2020 - present
 Online Open Access, Print Edition by Microtome Press
 Role: Standing senior reviewer.

EDITORIAL
 ACTIVITIES
 (CONFERENCES)

Area Chair, *Association for the Advancement of Artificial Intelligence (AAAI)* 2021
 Role: Invite and manage reviewers in a sub-area; make final accept/reject decisions.

Senior Program Committee, *International Joint Conference on Artificial Intelligence* 2021
 Role: Invite and manage reviewers in a sub-area; make final accept/reject decisions.

REVIEWING
 ACTIVITIES

Conferences
[Each listed year is a reviewing load of 4-8 papers as a program committee member.]

Neural Information Processing Systems (NeurIPS) 2014, 2015, 2018, 2019
 International Conference on Machine Learning (ICML) 2014, 2015, 2016, 2019, 2020
 Web Search and Data Mining (WSDM) 2017, 2018, 2019, 2020
 Empirical Methods in Natural Language Processing (EMNLP) 2018, 2019, 2020
 International Conference on Learning Representations (ICLR) 2019, 2020
 Association for the Advancement of Artificial Intelligence (AAAI) 2020
 International Conference on Intelligent Systems for Molecular Biology (ISMB) 2020
 International Joint Conference on Artificial Intelligence (IJCAI) 2020
 Social Informatics (SocInfo) 2020
 AAAI International Conference on the Web and Social Media (ICWSM) 2016, 2017, 2018
 Association for Computational Linguistics (ACL) 2016, 2017, 2020

Journals
[Each listed year is a reviewing load of 1-3 papers.]

Nature 2020
 Computational Linguistics 2020
 Transactions on Knowledge and Data Engineering 2020
 Science Advances 2020
 IEEE Transactions on Signal Processing 2020
 IEEE Transactions on Image Processing 2020
 IEEE Transactions on Neural Networks and Learning Systems 2020
 Journal of Machine Learning Research 2018, 2019, 2020
 IEEE Transactions on Pattern Analysis and Machine Intelligence 2018, 2020
 Transactions of the Association for Computational Linguistics (TACL) 2017
 Nature: Scientific Reports 2017

Journal of Complex Networks	2017
PLoS One	2017
Workshops	
<i>[Each listed year is a reviewing load of 3-5 papers.]</i>	
Workshop on Graphs, Architectures, Programming, and Learning (GrAPL)	2020
ICML Workshop on Learning and Reasoning with Graph-Structured Data	2019
KDD Workshop on Mining and Learning from Graphs	2019
KDD Workshop on Deep Learning on Graphs	2019
International Joint Conference on Natural Language Processing (IJCNLP)	2017
The Web Conference, Learning Representations for Big Networks Workshop	2018
The Web Conference, NLP for Social Media Workshop	2018
NeurIPS, Learning from Limited Labeled Data Workshop	2017
Association for Computational Linguistics, NLP and CSS Workshop	2017
Empirical Methods in Natural Language Processing, Social NLP Workshop	2017

ADVISING

Postdoctoral researchers:

- Michael Galkin, McGill University, *winter 2020 - present*
- Ladislav Rampasek (co-advised w/ Guy Wolf), University of Montreal, *fall 2020 - present*

PhD student supervision:

- Avishek Joey Bose, McGill University, *winter 2019 - present*
- Koustuv Sinha (co-advised w/ Joelle Pineau), McGill University, *winter 2019 - present*
- Zichao Yan (co-advised w/ Mathieu Blanchette), *fall 2019 - present*
- Priyesh Valore, *fall 2019 - present*
- Devendra Sachan Singh, *fall 2019 - present*
- Carlos Oliver (co-advised w/ Jerome Waldispuhl), McGill University, *winter 2019 - present*

MSc student supervision:

- Jon Lebensold, McGill University, *fast-tracked to PhD in fall 2019*
- Komal Teru, McGill University, *winter 2019 - present*
- Jin Dong , McGill University, *winter 2019 - present*
- Dora Jambor (co-advised w/ Joelle Pineau), *fall 2019 - present*
- Paul Wu (co-advised w/ Jackie Cheung), *fall 2019 - present*

BSc student supervision:

- Dylan Sandfelder, McGill University, *winter 2020*
- Rebecca Salganik, McGill University, *fall 2019*
- Boury Mbodj, McGill University, *fall 2019 - winter 2020*
- Etienne Denis, McGill University, *winter 2019 - winter 2020*
- Grace Hu , McGill University, *summer 2019*
- Paul Wu (co-advised with Jackie Cheung), *winter 2019 - summer 2019*

PhD thesis examinations:

- Qing Tiang (Oral Examiner), McGill University, *fall 2020*.
- Stratis Liminos (Thesis Examiner), l'Institut Polytechnique de Paris, *spring 2020*.
- Gautam Bhattacharya (Oral Examiner), McGill University, *winter 2020*

- Qinglong Wang (Internal Examiner), McGill University, *fall 2019*
- Antoine Soule (Oral Examiner), McGill University, *fall 2019*

PhD committee member:

- Manfred Diaz, Université de Montréal, *PhD proposal committee member*
- Xiaoting Wang, McGill University, *fall 2019 - present*
- David Earl Hostallero, McGill University, *fall 2019 - present*
- Bahare Fatemi, University of British Columbia, *fall 2019 - present*
- Prassana Parthasarathi, McGill University, *winter 2019 - present*
- Farzaneh Askari, McGill University, *winter 2019 - present*
- Muberra Ozmen, McGill University, *winter 2019 - present*

MSc thesis evaluations:

- Simon Leo Geoffroy-Gagnon, McGill University (MSc thesis), *May, 2020*
- Rajveer Singh Gandhi, McGill University, *October, 2019*
- Haohan Bo, McGill University, *August, 2019*
- Yangchao Yi, McGill University, *June, 2019*
- Juliette Valenchon, McGill University, *May, 2019*
- Kian Kenyon-Dean, McGill University, *May, 2019*
- Yi Tian Xu, McGill University, *April, 2019*

TEACHING

Instructor , <i>McGill University</i> COMP 451, Fundamentals of Machine Learning	<i>winter 2020</i>
Instructor , <i>McGill University</i> COMP 766, Graph Representation Learning	<i>winter 2020</i>
Instructor , <i>McGill University</i> COMP 551, Applied Machine Learning	<i>winter 2019, fall 2019</i>
Guest Lecturer , <i>CIFAR Deep Learning Summer School</i> Topic: Graph Representation Learning	<i>summer 2020</i>
Guest Lecturer , <i>Summer Institutes in Computational Social Science</i> Topic: Machine Learning	<i>summer 2020</i>
Guest Lecturer , <i>University of Montreal</i> IFT6135, Representation Learning (Instructor: Aaron Courville)	<i>winter 2019</i>
Guest Lecturer , <i>Stanford University</i> MAT6480, Geometric Data Analysis (Instructor: Guy Wolf)	<i>fall 2016</i>
Guest Lecturer , <i>Stanford University</i> CS 331B, Representation Learning in Computer Vision (Instructor: Amir Zamir)	<i>fall 2016</i>
Head Teaching Assistant , <i>Stanford University</i> CS 124, From Languages to Information (Instructor: Dan Jurafsky)	<i>winter 2017</i>
Head Teaching Assistant , <i>Stanford University</i> CS 224W, Social Network Analysis (Instructor: Jure Leskovec)	<i>fall 2016</i>

Plenary and keynote presentations

- Graph Representation Learning: Recent Advances and Open Challenges *December, 2020*
IEEE Big Data, Graph Techniques for Adversarial Activity Analytics Workshop
- Graph Representation Learning: Recent Advances and Open Challenges *August, 2020*
KDD Deep Learning Day
- Meta Learning and Logical Induction on Graphs *April, 2020*
The Web Conference, Deep Learning for Graphs Workshop
- Meta Learning and Logical Induction on Graphs *January, 2020*
AAAI Deep Learning on Graphs Workshop
- Graph Neural Networks and Graph Isomorphism *June, 2019*
ICML Workshop on Learning and Reasoning with Graph-structured Data, Long Beach
- Compositional Fairness Constraints for Graph Embeddings *May, 2019*
Machine Learning in Network Science Symposium, Vermont
- Compositional Fairness Constraints for Graph Embeddings *May, 2019*
Dynamics of and on Complex Networks Symposium, Vermont
- Representation Learning on Large Graphs with GraphSAGE *December, 2017*
NIPS Highlights Workshop: Learn How to Code a Paper
- Negativity and Lexical Innovation *June, 2017*
Dynamics of Lexical Innovation Workshop, LMU Munich
- Compressed Predictive State Representation [Award Talk for MSc Thesis Award] *June, 2015*
The 28th Canadian AI Conference

Academic seminars

- Machine Learning with Graphs *January, 2019*
McGill University TechWeek
- CLUTRR: A Diagnostic Benchmark for Inductive Reasoning from Text *November, 2019*
CMU Language Technologies Institute Colloquium, Pittsburgh
- Graph Neural Networks and Graph Isomorphism *November, 2019*
Cognitive Information Systems Seminar, University of Quebec at Montreal, Montreal
- Fairness Constraints for Graph Embeddings *October, 2019*
INFORMS, Seattle
- Fairness Constraints for Graph Embeddings *June, 2019*
IVADO Bias and Discrimination in AI Summer School, Montreal
- Inductive Reasoning and Representation Learning on Knowledge Graphs *January, 2019*
Ecole Polytechnique GIGL Seminar Series, Montreal
- Machine Learning for Computational Social Science *February, 2018*
Department of Computer Science and Operations Research, University of Montreal
- Machine Learning for Computational Social Science *February, 2018*
Vector Institute, Toronto
- Machine Learning for Computational Social Science *January, 2018*
School of Computer Science, McGill University

Quantifying Language Change with Vector Embeddings <i>Centre for Language Evolution, University of Edinburgh</i>	August, 2017
Negativity and Semantic Change <i>Alan Turing Institute, London</i>	August, 2017
Modelling Language Change with Word Embeddings <i>UROF Seminar Series, Cambridge University</i>	July, 2017
Encoding and Decoding Graphs with Neural Networks <i>Computational and Biological Learning Lab, Cambridge University</i>	June, 2017
Inductive Representation Learning on Large Graphs <i>Reasoning and Learning Lab, McGill University</i>	June, 2017
Negativity and Semantic Change <i>Institute for Natural Language Processing, University of Stuttgart</i>	June, 2017
The Semantic Instability of Negative Language: Causes and Consequences <i>Semantics and Pragmatics Lecture Series, Stanford University</i>	April, 2017
Spectral Methods for Learning Latent Variable Models <i>Max Planck Institute for Intelligent Systems</i>	May, 2014
Industry seminars	
Graph Neural Networks and Graph Isomorphism <i>Element AI Seminar Series, Montreal</i>	August, 2019
Inductive Relational Reasoning <i>Samsung GRP Workshop, Montreal</i>	May, 2019
Learning and Reasoning with Graph Structures in Interactive Text Environments <i>MSR and Mila Workshop, Montreal</i>	October, 2019
Graph Embeddings for Large-Scale Social Applications <i>Facebook Core Data Science, Menlo Park</i>	March, 2018
Graph Embeddings for Large-Scale Social Applications <i>Facebook AI Research, Menlo Park</i>	February, 2018
Graph Embeddings for Large-Scale Social Applications <i>Google Brain, Montreal</i>	January, 2018
MISC. SERVICE	
Evaluator , NSERC Discovery Grants Program	2020
Evaluator , MITACS Accelerate Program	2020
Evaluator , IVADO Research Grants Committee	2020
Member , McGill GIC Oversight Committee	2020
Member , Scientific Committee, Mila - Artificial Intelligence Institute of Quebec	2019 - present
Member , McGill Cognitive Science Committee	2019 - present
Member , McGill Computer Science MSc Admissions Committee	2019, 2020
Member/Evaluator , IVADO PhD Fellowship Committee	2020
Dean's Representative , McGill ECSE Faculty Search Committee	2020
Volunteer Judge , McGill Undergraduate Computer Science Research Symposium	2019