

FARNAM MANSOURI

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RESEARCH INTERESTS

Statistical Learning Theory
Reinforcement Learning Theory

Language Learning Theory
Machine Teaching

Optimization
Deep Learning

EDUCATION

University of Waterloo

Ph.D. in Computer Science

Advised by Shai Ben-David and Sandra Zilles

Jan 2023 – May 2027 (Expected)

University of Toronto

M.Sc. in Computer Science

Advised by Murat Erdogdu and Amir-massoud Farahmand

Sep 2020 – Aug 2022

Sharif University of Technology

B.Sc. in Software Engineering with a minor in Mathematics

Sep 2015 – Aug 2020

PUBLICATIONS

Refereed

- [P1] Surprises in Proper Positive-Only Learning
S. Ben-David, **F. Mansouri**, A. Mehrotra, M. Zampetakis[†]
The 40th Annual Conference on Neural Information Processing Systems (NeurIPS), 2026;
Oral Presentation, Top 0.4% of Submissions
- [P2] Settling the Sample Complexity of Deterministic Agnostic PAC Learning
S. Ben-David, S. Hanneke, **F. Mansouri**, A. Shaeiri[†]
The 40th Annual Conference on Neural Information Processing Systems (NeurIPS), 2026
- [P3] Learning with Multiple Correct Answers – Regret Bounds under Different Feedback Models
A. F. Pour*, **F. Mansouri***, S. Ben-David
The 40th Annual Conference on Neural Information Processing Systems (NeurIPS), 2026
- [P4] Active learning from positive and unlabeled examples
F. Mansouri, S. Zilles, S. Ben-David
The 40th Annual Conference on Neural Information Processing Systems (NeurIPS), 2026
- [P5] The Computational Complexity of Almost Stable Clustering with Penalties
F. Mansouri, S. Zilles, K. Khodamoradi
The 35th International Joint Conference on Artificial Intelligence (IJCAI), 2026
- [P6] Learning from positive and unlabeled examples—Finite size sample bounds
F. Mansouri, S. Ben-David
The 39th Annual Conference on Neural Information Processing Systems (NeurIPS), 2025
- [P7] Formal Models of Active Learning from Contrastive Examples
F. Mansouri, H. U. Simon, Y. Chen, A. Singla, S. Zilles
The 39th Annual Conference on Neural Information Processing Systems (NeurIPS), 2025
- [P8] On Batch Teaching with Sample Complexity Bounded by VCD
F. Mansouri, H. U. Simon, A. Singla, S. Zilles
The 36th Conference on Neural Information Processing Systems (NeurIPS), 2022; **Spotlight Paper**
- [P9] Deep Reinforcement Learning for Online Control of Stochastic Partial Differential Equations
E. Pirmorad*, F. Khoshbakhtian*, **F. Mansouri***, A. M. Farahmand
NeurIPS Workshop on the Symbiosis of Deep Learning and Differential Equations (DLDE), 2021; **Spotlight paper**
- [P10] ChOracle: A Unified Statistical Framework for Churn Prediction
A. Khodadadi, A. Hosseini, E. Pajouheshgar, **F. Mansouri**, H. R. Rabiee
IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), 2020

- [P11] Understanding the Power and Limitations of Teaching with Imperfect Knowledge
R. Devidze*, **F. Mansouri***, L. Haug, Y. Chen, A. Singla
The 29th International Joint Conference on Artificial Intelligence (IJCAI), 2020
- [P12] Preference-Based Batch and Sequential Teaching: Towards a Unified View of Models
F. Mansouri, Y. Chen, A. Vartanian, X. Zhu, A. Singla
The 33rd Conference on Neural Information Processing Systems (NeurIPS), 2019

Preprints and Manuscripts

- [M1] Deterministic Proper Positive-Only Learning is Independent of ZFC
S. Ben-David, **F. Mansouri**, A. Mehrotra[†]
Submitted to the 38th International Conference on Algorithmic Learning Theory (ALT), 2027
- [M2] Query Feedback and Teaching for Stable and Certifiable Language Generation
F. Mansouri, A. F. Pour, G. Velez, S. Zilles[†]
Submitted to the 38th International Conference on Algorithmic Learning Theory (ALT), 2027
- [M3] On the Convergence and Approximation of Policy Gradient Methods for Spectral Measures
F. Mansouri
M.Sc. Thesis (PDF available upon request), 2022
- [M4] Learning Half-Spaces from Perturbed Contrastive Examples
A. A. R. Ravari*, **F. Mansouri***, Y. Chen, V. Ivarson, A. Singla, S. Zilles
arXiv:2602.02080, 2026
- [M5] Preference-Based Batch and Sequential Teaching
F. Mansouri, Y. Chen, A. Vartanian, X. Zhu, A. Singla
arXiv:2010.10012, 2020

* Equal contributions. † Authors are listed in alphabetical order.

PROFESSIONAL EXPERIENCE

RBC Borealis	<i>Oct 2026 – Feb 2027 (Expected)</i>
Machine Learning Research Internship	<i>Toronto, Canada</i>
Research on the statistical and computational complexity of transformers.	
Max Planck Institute for Software Systems	<i>July 2018 – Sep 2019</i>
Research Internship	<i>Saarbruecken, Germany</i>
Under the supervision of Adish Singla, Machine Teaching Group.	
Yektanet	<i>June 2017 – Sep 2017</i>
AI Engineer	<i>Tehran, Iran</i>
Developed a framework to classify Persian web-page content into 12 categories. Yektanet is the largest recommendation system platform in Iran.	

PROGRAMMING SKILLS

Python R Java C/C++ PyTorch TensorFlow scikit-learn PostgreSQL

AWARDS AND HONORS

David R. Cheriton Graduate Scholarship 20,000 CAD	<i>2026–2028</i>
NSERC Canada Graduate Scholarship-Doctoral (CGS-D) 120,000 CAD	<i>2024–2027</i>
David R. Cheriton Graduate Scholarship 20,000 CAD	<i>2023–2025</i>
Ontario Graduate Scholarship 15,000 CAD	<i>2020–2021</i>
Vector Institute Scholarship in Artificial Intelligence 17,500 CAD	<i>2020–2021</i>
Iran National Mathematics Olympiad Silver medal; among the top 40 students in Iran, out of more than 30,000 initial participants.	<i>2014</i>

TALKS

On Batch Teaching with Sample Complexity Bounded by VCD Winter meeting of the Canadian Mathematical Society Special session: “Current trends in matrices, graphs and computing”.	<i>Dec 2023</i> <i>Montreal, Canada</i>
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PROFESSIONAL SERVICES

Conference Program Committee Member/Reviewer for **NeurIPS** (2021, 2022, 2023, 2025, 2026), **ICML** (2023, 2024, 2025, 2026), **AAAI** (2023), **ICLR** (2024)

TEACHING

Teaching Assistant Experiences

Vector Institute • Causal Inference workshop	<i>Toronto, Canada</i> <i>Spring 2023</i>
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University of Waterloo • Data Structures and Data Management • Algorithmic Problem Solving • Data Types and Structures • Logic and Computation • Elementary Algorithm Design and Data Abstraction	<i>Waterloo, Canada</i> <i>Winter 2025, Spring 2025</i> <i>Spring 2024</i> <i>Fall 2024</i> <i>Spring 2023, Fall 2024 (IA), Winter 2024, Fall 2025, Fall 2026</i> <i>Winter 2023, Winter 2026</i>
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University of Toronto • Machine Learning for Healthcare* • Minimizing Expectations* • Introduction to Machine Learning	<i>Toronto, Canada</i> <i>Fall 2021</i> <i>Winter 2021</i> <i>Fall 2020</i>
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Sharif University of Technology • Deep Learning* • Machine Learning* • Linear Algebra • Design of Algorithms • Engineering Probability and Statistics	<i>Tehran, Iran</i> <i>Spring 2019</i> <i>Fall 2018</i> <i>Fall 2018</i> <i>Spring 2017</i> <i>Fall 2016, Spring 2016</i>
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* Graduate Courses

Tutoring Teaching Combinatorics for high school students, preparing for Iran National Mathematics competition at Helli 1 High School.	<i>2015–2016</i> <i>Tehran, Iran.</i>
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