Mehran Shakerinava

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EDUCATION		
	◇ **Ph.D. in Computer Science** Mila and McGill University, Montréal, Québec Advised by Siamak Ravanbakhsh GPA: 4/4	2021 – Now
	◇ **M.Sc. in Computer Science** Mila and McGill University, Montréal, Québec Advised by Siamak Ravanbakhsh Fast-tracked to Ph.D.	2020 – 2021
	◇ **B.Sc. in Computer Engineering** Sharif University of Technology, Tehran, Iran GPA: 17.41/20 (150 credits)	2014 – 2019

RESEARCH INTERESTS

◇ Combinatorial Problems and Algorithms in Machine Learning, Optimization, and Statistics

◇ Symmetry and Equivariance

◇ Game Theory and Reinforcement Learning

PUBLICATIONS

◇ **M. Shakerinava**, A. K. Mondal, and S. Ravanbakhsh. "Structuring Representations Using Geometric Invariants." *Advances in Neural Information Processing Systems (NeurIPS)*, 2022.

◇ **M. Shakerinava**, and S. Ravanbakhsh. "Utility Theory for Sequential Decision Making." *International Conference on Machine Learning (ICML)*. PMLR, 2022.

◇ **M. Shakerinava**, and S. Ravanbakhsh. "Equivariant networks for pixelized spheres." *International Conference on Machine Learning (ICML)*. PMLR, 2021.

◇ F. Golshan, M. Bakhshalipour, **M. Shakerinava**, A. Ansari, P. Lotfi-Kamran, and H. Sarbazi-Azad, "Harnessing Pairwise-Correlating Data Prefetching With Runahead Metadata." *Computer Architecture Letters (CAL)*, 2020.

◇ M. Bakhshalipour, **M. Shakerinava**, P. Lotfi-Kamran, and H. Sarbazi-Azad, "Bingo Spatial Data Prefetcher." *International Symposium on High-Performance Computer Architecture (HPCA)*, 2019.

WORKSHOP PAPERS

◇ **M. Shakerinava**, M. Bakhshalipour, P. Lotfi-Kamran, and H. Sarbazi-Azad, "Multi-Lookahead Offset Prefetching," in *The Third Data Prefetching Championship (DPC3)*, in conjunction with *International Symposium on Computer Architecture (ISCA)*, 2019.

◇ M. Bakhshalipour, **M. Shakerinava**, P. Lotfi-Kamran, and H. Sarbazi-Azad, "Accurately and Maximally Prefetching Spatial Data Access Patterns with Bingo," in *The Third Data Prefetching Championship (DPC3)*, in conjunction with *International Symposium on Computer Architecture (ISCA)*, 2019.

PREPRINTS

◇ M. Bakhshalipour, **M. Shakerinava**, F. Golshan, A. Ansari, P. Lotfi-Karman, and H. Sarbazi-Azad, "A Survey on Recent Hardware Data Prefetching Approaches with An Emphasis on Servers." *arXiv preprint arXiv:2009.00715*, 2020.

HONORS AND AWARDS	⋄ Kharusi Family International Science Fellowship *McGill University* Valued at 7500$	2020
	⋄ **1st Place** (among ~30,000 participants) *Iran's National Master's Entrance Exam* Computer Engineering track, AI/Robotics major	2019
	⋄ **2nd and 3rd Place (1st and 2nd Place in Multi-Core Setting)** *The Third Data Prefetching Championship (DPC3) at ISCA 2019*	2019
	⋄ **1st Place** Programming Contest at Iran's 3rd Python Conference (*PyCon 2016*)	2016
	⋄ **Silver Medal** (Ranked ~15 among ~10,000) 21st *Iranian National Olympiad in Informatics*	2012

TEACHING EXPERIENCE

⋄ **Organizing Team**

Mathematics Study Group (Mila Quebec AI Institute) — 2023
Taught real mathematical analysis and held problem-solving sessions.

⋄ **Teaching Assistant**

Algorithms and Data Structures (McGill University)	Fall 2023
Theory of Computation (McGill University)	Fall 2022
Probabilistic Graphical Models (McGill University)	Winter 2022
Artificial Intelligence (Sharif University of Technology)	Spring 2018 and Spring 2019
Advanced Programming (Sharif University of Technology)	Fall 2016

⋄ **Teacher**

Informatics Olympiad (NODET High-School) — 2012 – 2015
Taught topics on Combinatorics, Graph Theory, Algorithms, and Programming.

SKILLS

⋄ C/C++, Java, Python, MATLAB, PyTorch, TensorFlow, CUDA, Git, Verilog, JavaScript, LaTeX

PROFESSIONAL SERVICE

⋄ **Reviewer**
NeurIPS 2022-2023, ICLR 2024, AISTATS 2024, Montreal AI Symposium (MAIS) 2022.

REFERENCES

⋄ **Siamak Ravanbakhsh (Advisor)**
Assistant Professor, School of Computer Science, McGill University
`siamak@cs.mcgill.ca`