Mehran Shakerinava

School of Computer Science McGill University 3480 University St, Montréal, Québec H3A 0E9 mehran.shakerinava@mail.mcgill.ca mehran.shakerinava@mila.quebec +1(438)881-3645

EDUCATION

♦ Ph.D. in Computer Science

2021 - Now

School of Computer Science and Mila McGill University, Montréal, Québec Supervised by Siamak Ravanbakhsh GPA: 4/4

\diamond M.Sc. in Computer Science

2020 - 2021

School of Computer Science and Mila McGill University, Montréal, Québec Supervised by Siamak Ravanbakhsh Fast-tracked to Ph.D.

♦ B.Sc. in Computer Engineering

2014 - 2019

Department of Computer Engineering Sharif University of Technology, Tehran, Iran

GPA: 17.41/20 (150 credits)

Research

 $\diamond\,$ Differentiable self-organizing systems

Interests

♦ Symmetry and invariance in deep representation learning

Publications

- ♦ M. Shakerinava, and S. Ravanbakhsh. "Utility Theory for Sequential Decision Making." *International Conference on Machine Learning (ICML)*. PMLR, 2022.
- ♦ M. Shakerinava, AK. Mondal, and S. Ravanbakhsh. "Transformation Coding: Simple Objectives for Equivariant Representations." arXiv preprint arXiv:2202.10930, 2022.
- ♦ M. Shakerinava, and S. Ravanbakhsh. "Equivariant networks for pixelized spheres." *International Conference on Machine Learning (ICML)*. PMLR, 2021.
- 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:2009.00715, 2020.
- 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.

Honors and Awards

♦ Kharusi Family International Science Fellowship

2020

McGill University Valued at 7500\$

♦ 1st Place (among 30,000 participants)

2019

Iran's National Master's Entrance Exam

Computer Engineering track, AI/Robotics major

♦ 2nd and 3rd Place (1st and 2nd Place in Multi-Core Setting)

2019

2016

The Third Data Prefetching Championship (DPC3) at ISCA 2019

♦ 1st Place

Programming Contest at Iran's 3rd Python Conference (PyCon 2016)

♦ Silver Medal (Ranked 15 among 10,000)

2012

21st Iranian National Olympiad in Informatics

Teaching

♦ Teaching Assistant

EXPERIENCE

Fall 2022 - Theory of Computation McGill University, Montreal, Canada

Currently in progress.

♦ Teaching Assistant

Winter 2022 - Probabilistic Graphical Models

McGill University, Montreal, Canada

Graded assignments and held office hours.

♦ Teaching Assistant

Spring 2018 and Spring 2019 - Artificial Intelligence

Sharif University of Technology, Tehran, Iran

Designed and graded assignments. Held recitation classes for clarifying and solving assignments.

\diamond Teaching Assistant

Fall 2016 - Advanced Programming

Sharif University of Technology, Tehran, Iran

Held a recitation class. Designed and graded a quiz and a programming assignment.

♦ Instructor

Informatics Olympiad (2012 – 2015)

NODET High-School

Taught topics on Combinatorics, Graph Theory, Algorithms, and Programming.

Professional \diamond Reviewer

SERVICE NeurIPS 2022.

⋄ Reviewer

Montreal AI Symposium (MAIS) 2022.