Parsa Rangriz

EDUCATION

University of California, San Diego

PhD in Mathematics (Expected: Sep 2025)

University of Waterloo

MMath in Statistics (Sep 2023 - Apr 2025)

- Advisor: Prof. Aukosh Jagannath
- Thesis: High-Dimensional Scaling Limits of SGD in Single-Index Models

Sharif University of Technology

BSc in Physics (Sep 2018 - Feb 2023)

• Minor in Mathematics

Interests

- Probability Theory
- High-Dimensional Statistics
- Stochastic Analysis

- Random Matrix Theory
- Mathematical Physics
- Statistical Physics

RESEARCH EXPERIENCES

Graduate Research Student

University of Waterloo (Sep 2023 - Apr 2025)

- Supervisor: Prof. Aukosh Jagannath
- Project: High-Dimensional Scaling Limits of SGD in Single-Index Models

Undergraduate Student

Sharif University of Technology (Oct 2021 - Apr 2023)

- Supervisor: Prof. Saman Moghimi and Prof. Abolfazl Ramezanpour
- Project: Loop corrections for hard spheres in Hamming space.

Summer Research Intern

EPFL (July 2022 - Sep 2022)

- Supervisor: Prof. Lenka Zdeborova
- Project: Assortative Partitions on Dense Random Graphs.

Undergraduate Research Student

Sharif University of Technology (June 2021 - Sep 2021)

- Supervisor: Prof. Amir Daneshgar
- Project: Belief Propagation for Graph Bi-Partitioning.

Remote Research Intern

University of Manchester (Feb 2021 - Jun 2021)

- Supervisor: Dr. Ahsan Nazir and Dr. Adam Stokes
- Project: Thermodynamics of Non-Conjugate Quantum Subsystems.

Honors and Awards

University of Waterloo Graduate Scholarship, 2025

Graduate Research Studentship, University of Waterloo, 2023-2025

International Master's Award of Excellence, University of Waterloo, 2023

MMath Entrance Scholarship, University of Waterloo, 2023

Summer@EPFL Fellowship, EPFL, 2022

Ranked 5th the 26th Iran University Physics Olympiad, Sanjesh Org., 2021

Silver Medal in the 30th Iran National Physics Olympiad, Sampad Org., 2017

SUMMER SCHOOLS

CRM-PIMS Summer School in Probability, University of Montreal, Canada, 2024 Quantum Thermodynamics Summer School, ETH Zurich, Switzerland, 2021

TEACHING EXPERIENCES

Teaching Assistant, University of Waterloo (2023-2025)

- STAT 333: Stochastic Processes 1 (Winter 2025, Winter 2024)
- STAT 833: Stochastic Processes 2 (Fall 2024)
- STAT 330: Mathematical Statistics (Spring 2024, Fall 2023)
- \bullet STAT 231: Probability (Spring 2024)
- STAT 230: Statistics (Spring 2024)
- STAT 202: Introductory Statistics for Scientists (Fall 2023)

Teaching Assistant, Sharif University of Technology (2019-2022)

- Thermodynamics and Statistical Mechanics 3 (Fall 2022, Fall 2021, Spring 2021)
- Thermodynamics and Statistical Mechanics 2 (Spring 2021)
- Thermodynamics and Statistical Mechanics 1 (Fall 2020)
- General Physics 3 (Fall 2019)
- Fundamentals of C Programming (Fall 2019)

Skills

Programming: Experienced in C and Python

Libraries: Familiar with Scikit-Learn, Keras, and TensorFlow Tools: Experienced in Wolfram Mathematica and LATEX

Languages: English (C1), Turkish (Fluent), Azerbaijani and Persian (Native)