Parsa Rangriz

Contact Information

Department of Mathematics,
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Education

University of California, San Diego 2025 - Present
Ph.D. in Mathematics

University of Waterloo 2023 - 2025
MMath in Statistics
Advisor: Aukosh Jagannath

Sharif University of Technology 2018 - 2023
B.Sc. in Physics
Minor in Mathematics

Publications

[2] **P. Rangriz**, *Limit theorems for stochastic gradient descent in high-dimensional single-layer networks*, Electronic Communications in Probability, 31, No. 15 (2026).

[1] **P. Rangriz**, *High-dimensional scaling limits of online stochastic gradient descent in single-index models*, Master of Mathematics Thesis, University of Waterloo (2025).

Employment

Teaching Assistant, UC San Diego 2025 - Present
Weekly discussion sections, office hours, and exam grading for undergrad math courses.

Graduate Research Student, University of Waterloo 2023 - 2025
Supervisor: Aukosh Jagannath

Worked on high-dimensional probability, scaling limits, random matrices, and mathematical foundations of machine learning.

Teaching Assistant, University of Waterloo 2023 - 2025
Weekly tutorials, office hours, and exam grading for undergrad statistics courses.

Summer Research Intern, EPFL 2022
Supervisor: Lenka Zdeborová

Worked at the SPOC lab on statistical physics methods for machine learning and combinatorial optimization during the Summer@EPFL internship.

Awards & Honors

First-Year Departmental Fellowship. UC San Diego 2025 - 2026

Graduate Research Studentship. University of Waterloo 2023 - 2025

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

Master of Math Entrance Scholarship. University of Waterloo 2023

Summer@EPFL Fellowship. EPFL 2022

Silver Medal in the **Iranian Physics Olympiad** 2017

Summer Schools

CRM-PIMS Summer School in Probability 2024
Centre de Recherches Mathématiques (CRM), Montréal

Teaching

Teaching Assistant, UC San Diego — 2025 - Present

- MATH 18: Linear Algebra *(Fall '26)*
- PHYS 1CL: Waves, Optics & Modern Physics Lab *(Summer '26)*
- MATH 193A: Actuarial Mathematics *(Summer '26)*
- MATH 180A: Introduction to Probability *(Spring '26)*
- MATH 10B: Calculus II *(Winter '26)*
- MATH 11: Calculus-Based Probability and Statistics *(Fall '25)*

Teaching Assistant, University of Waterloo — 2023 - 2025

- STAT 333: Stochastic Processes I *(Winter '25, Winter '24)*
- STAT 433: Stochastic Processes II *(Fall '24)*
- STAT 330: Mathematical Statistics *(Fall '23, Spring '24)*
- STAT 231: Probability *(Spring '24)*
- STAT 230: Statistics *(Spring '24)*
- STAT 202: Introductory Statistics for Scientists *(Fall '23)*