Parsa Rangriz

CONTACT INFORMATION	Department of Mathematics, University of California, San Diego, 9500 Gilman Drive #0112 La Jolla, CA, USA, 92093-0112 Office: HSS 4047	prangriz@ucsd.edu https://www.rangriz.com

EDUCATION

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

University of Waterloo (Sep 2023 - Apr 2025)
M.Sc. in Statistics (*Advisor*: Aukosh Jagannath)

Sharif University of Technology (Sep 2018 - Feb 2023)
B.Sc. in Physics w/ Minor in Mathematics

INTERESTS

Probability & High-Dimensional Statistics: stochastic analysis, random matrices, learning theory, statistical physics, combinatorial optimization.

PUBLICATIONS

P. Rangriz, **Limit theorems for stochastic gradient descent in high-dimensional single-layer networks**, arXiv:2511.02258 (Nov 2025)

1. P. Rangriz, **High-dimensional scaling limits of online stochastic gradient descent in single-index models**, M.Sc. Thesis, University of Waterloo (Apr 2025)

RESEARCH EXPERIENCES

Graduate Research Student
University of Waterloo (Sep 2023 - Apr 2025)
Supervisor: Aukosh Jagannath

Research Intern − Summer@EPFL
Statistical Physics of Computation Lab, EPFL (July 2022 - Sep 2022)
Supervisor: Lenka Zdeborova

AWARDS & HONORS

Department of Mathematics Fellowship, UC San Diego, 2025

UW Graduate Scholarship, University of Waterloo, 2025

Graduate Research Studentship, University of Waterloo, 2023-2025

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

Master of Mathematics Entrance Scholarship, University of Waterloo, 2023

Summer@EPFL Fellowship, EPFL, 2022

Silver Medal in the **30th Iran National Physics Olympiad**, 2017

TA EXPERIENCES

UC San Diego (2025-Present)
MATH 20B: Calculus 2 (Winter '26), MATH 11: Probability and Statistics (Fall '25)

University of Waterloo (2023-2025)
STAT 333: Stochastic Processes 1 (Winter '25, Winter '24), STAT 833: Stochastic Processes 2 (Fall '24), STAT 330: Mathematical Statistics (Spring '24, Fall '23), STAT 231: Probability (Spring '24), STAT 230: Statistics (Spring '24), STAT 202: Introductory Statistics for Scientists (Fall '23)

Sharif University of Technology (2019-2022)
Advanced Statistical Mechanics (Fall '22, Fall '21, Spring '21), Statistical Mechanics (Spring '21), Thermodynamics (Fall '20), General Physics 3 (Fall '19), Fundamentals of C Programming (Fall '19)