
JULIA B. NAKHLEH

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EDUCATION

University of Wisconsin-Madison

Ph.D. in Computer Sciences (in progress)

September 2021 - present

- Advisor: Robert D. Nowak

University of Wisconsin-Madison

M.A. in Mathematics (Foundations for Research)

September 2022 - May 2024

- Coursework in Fourier/harmonic and complex analysis, nonlinear optimization, randomized numerical linear algebra, differentiable manifolds

Arizona State University

B.S. in Computer Science, B.A. in Spanish

August 2015 - May 2019

- Advisor: Siddharth Srivastava
- GPA: 4.0

RESEARCH INTERESTS

Mathematical properties of neural networks trained with weight-based regularization schemes; connections with applied computational/harmonic analysis, nonparametric statistics, and compressed sensing.

PUBLICATIONS AND PREPRINTS

- **Global Minimizers of ℓ^p -Regularized Objectives Yield the Sparsest ReLU Networks**

Julia B. Nakhleh, Robert D. Nowak

Preprint [[arXiv](#)]

- **A New Neural Kernel Regime: The Inductive Bias of Multi-Task Learning**

Julia B. Nakhleh, Joseph Shenouda, Robert D. Nowak

Conference on Neural Information Processing Systems (NeurIPS) 2024 [[proceedings](#)] [[arXiv](#)]

- **Training OOD Detectors in their Natural Habitats**

Julian J. Katz-Samuels*, Julia B. Nakhleh*, Robert D. Nowak, Yixuan Li (*equal contribution)

International Conference on Machine Learning (ICML) 2022 [[proceedings](#)] [[arXiv](#)]

TEACHING AND GRADING

TA for MATH/STAT/ECE 888 (Nonparametric Methods in Data Science), UW Madison

Spring 2025

Grader for MATH 718 (Randomized Numerical Linear Algebra), UW Madison

Fall 2024

Undergraduate TA for CSE 310 (Data Structures & Algorithms), ASU

Fall 2018

Undergraduate TA for CSE 100 (Intro to C++), ASU

Spring 2018

Math tutor (calculus I-III, linear algebra, discrete math, statistics), ASU

Fall 2016

ACADEMIC SERVICE

Reviewer, Review of Scientific Instruments (RSI) Online

2021

AWARDS & SCHOLARSHIPS

NSF Graduate Research Fellowship Program (GRFP), Honorable Mention

2021

ASME Student Presentation Award Winner, 2nd place

2020

Phi Beta Kappa Honor Society

2019

Fulbright Scholarship (Spain - Study/Research), Semi-Finalist

2019

Marshall Scholarship, Finalist

2018

National Merit Scholar

2015 - 2019

New American University Scholar, Arizona State University

2015 - 2019

SKILLS

Programming Languages: Python, C, C++, MATLAB, Java, SQL

Machine Learning Toolboxes: TensorFlow, PyTorch, Keras, Scikit-learn

Languages: English (native), Spanish (fluent - C1 DELE diploma), Portuguese (advanced)