JULIA B. NAKHLEH

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EDUCATION

University of Wisconsin-Madison *September 2021 - present*
Ph.D. in Computer Sciences (in progress)

- Advisor: Robert D. Nowak

University of Wisconsin-Madison *September 2022 - May 2024*
M.A. in Mathematics (Foundations for Research)

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

Arizona State University *August 2015 - May 2019*
B.S. in Computer Science, B.A. in Spanish

- Advisor: Siddharth Srivastava
- GPA: 4.0

RESEARCH INTERESTS

Mathematical properties of neural networks trained with weight-based regularization schemes; connections with applied computational and harmonic analysis, nonparametric regression/function estimation, 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, 2^{nd} 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)