

Nikos Zarifis

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EDUCATION

University of Wisconsin-Madison

Aug 2019 - now

Ph.D. in Computer Sciences

Advisor: [Ilias Diakonikolas](#)

National Technical University of Athens

Sep 2012 - Nov 2018

Diploma in Electrical and Computer Engineering

Major: Computer Science Minor: Mathematics

Advisor: [Dimitris Fotakis](#)

RESEARCH INTERESTS

Foundations of Machine Learning

PUBLICATIONS*

*Ordering in publications is alphabetical by convention in Theoretical Computer Science/Learning Theory.

Near-Optimal Bounds for Learning Gaussian Halfspaces with Random Classification Noise with I. Diakonikolas, J. Diakonikolas, D. M. Kane, P. Wang (**NeurIPS 2023**)

Efficient Testable Learning of Halfspaces with Adversarial Label Noise with I. Diakonikolas, D. M. Kane, V. Kontonis, S. Liu (**NeurIPS 2023**)

Robustly Learning a Single Neuron via Sharpness with I. Diakonikolas, J. Diakonikolas, P. Wang (**ICML 2023**) Selected for Oral Presentation

Information-Computation Tradeoffs for Learning Margin Halfspaces with Random Classification Noise with I. Diakonikolas, J. Diakonikolas, D. M. Kane, P. Wang (**COLT 2023**)

Self-Directed Linear Classification with I. Diakonikolas, V. Kontonis, C. Tzamos (**COLT 2023**)

SQ Lower Bounds for Learning Mixtures of Separated and Bounded Covariance Gaussians with I. Diakonikolas, D. M. Kane, T. Pittas (**COLT 2023**)

Learning a Single Neuron with Adversarial Label Noise via Gradient Descent with I. Diakonikolas, V. Kontonis, C. Tzamos (**COLT 2022**)

Learning General Halfspaces with Adversarial Label Noise via Online Gradient Descent with I. Diakonikolas, V. Kontonis, C. Tzamos (**ICML 2022**)

Learning General Halfspaces with General Massart Noise under the Gaussian Distribution with I. Diakonikolas, D. M. Kane, V. Kontonis, C. Tzamos (**STOC 2022**)

Agnostic Proper Learning of Halfspaces under Gaussian Marginals with I. Diakonikolas, D. M. Kane, V. Kontonis, C. Tzamos (**COLT 2021**)

The Optimality of Polynomial Regression for Agnostic Learning under Gaussian Marginals with I. Diakonikolas, D. M. Kane, T. Pittas (**COLT 2021**)

Learning Online Algorithms with Distributional Advice with I. Diakonikolas, V. Kontonis, C. Tzamos, A. Vakilian (**ICML 2021**)

A Polynomial Time Algorithm for Learning Halfspaces with Tsybakov Noise with I. Diakonikolas, D. M. Kane, V. Kontonis, C. Tzamos (**STOC 2021**)

Learning Halfspaces with Tsybakov Noise with I. Diakonikolas, V. Kontonis, C. Tzamos (**STOC 2021**). Conference version merged with paper above

Near-Optimal SQ Lower Bounds for Agnostically Learning Halfspaces and ReLUs under Gaussian Marginals with I. Diakonikolas, D. M. Kane (**NeurIPS 2020**)

Non-Convex SGD Learns Halfspaces with Adversarial Label Noise with I. Diakonikolas, V. Kotonis, C. Tzamos (**NeurIPS 2020**)

Algorithms and SQ Lower Bounds for PAC Learning One-Hidden-Layer ReLU Networks with I. Diakonikolas, D. M. Kane, V. Kotonis (**COLT 2020**)

Learning Halfspaces with Massart Noise under Structured Distributions with I. Diakonikolas, V. Kotonis, C. Tzamos (**COLT 2020**)

Reallocating Multiple Facilities on the Line with D. Fotakis, L. Kavouras, P. Koutsopanagiotis, P. Lazos, S. Skoulakis (**TCS 2021**)

COLT: Conference on Learning Theory, **ICML**: International Conference on Machine Learning, **NeurIPS**: Advances in Neural Information Processing Systems, **STOC**: ACM Symposium on Theory of Computing, **TCS**: Theoretical Computer Science (Journal)

AWARDS

2019-Present

2024: CS Ivanisevic Award

2022: Bodossaki Foundation Fellowship

2021: Outstanding Reviewer Award (NeurIPS 2021): Top 8%

2020: Gerondellis Foundation Fellowship

2012-2018, National Technical University of Athens

2014: South Eastern European Mathematical Olympiad for University Students (SEEMOUS) [2014](#): Gold Medal (Rank: 3rd) & Member of Greek National Team (after internal competition)

2013: South Eastern European Mathematical Olympiad for University Students (SEEMOUS) [2013](#): Silver Medal (Rank: 11th)

2012-2013: Papakyriakopoulos award for excellence in Mathematics

TEACHING EXPERIENCE

Teaching Assistant, UW-Madison

CS760: “Machine Learning” Fall 2022

CS540: “Introduction to Artificial Intelligence” Spring 2022

CS639: “Intro to Computational Learning Theory” Fall-Spring 2020

CS300: “Introduction to Programming II” Fall 2019

Teaching Assistant, NTUA

“Introduction to Computer Programming” Fall 2013-2019

“Discrete Mathematics” Spring 2018

“Algorithms and Complexity” Fall 2017-2019

SERVICE

Conference Reviewer

Neural Information Processing Systems (NeurIPS): 2022, 2021

Conference on Learning Theory (COLT): 2022

Journal Reviewer

Theoretical Computer Science (TCS): 2022

Transactions on Machine Learning Research (TMLR): 2022

TECHNICAL SKILLS

Python, Mathematica, \LaTeX , Linux

LANGUAGES

English (fluent), **Greek** (native)