Thanasis Pittas

Website: thanasispittas.github.io

RESEARCH INTERESTS

Machine Learning, Statistics, Theoretical Computer Science

EDUCATION

University of Wisconsin-Madison   Aug 2020 - now
Ph.D. in Computer Science
Advisor: Ilias Diakonikolas

University of Wisconsin-Madison   Aug 2020 - now
MSc in Computer Science
GPA: 4.0/4
Thesis: Statistical Query Lower Bounds for Learning Truncated Gaussians
Advisor: Ilias Diakonikolas

National Technical University of Athens   Sep 2014 - Nov 2019
Diploma in Electrical and Computer Engineering
GPA: 9.64/10 (*4th out of 289*)
Thesis: Estimation of Graph Parameters from Noisy Samples and Queries
Advisor: Dimitris Fotakis

PUBLICATIONS*

*Author names are listed in alphabetical order

Robust Sparse Estimation for Gaussians with Optimal Error under Huber Contamination
Ilias Diakonikolas, Daniel M. Kane, Sushrut Karmalkar, Ankit Pensia, Thanasis Pittas
ICML 2024

Statistical Query Lower Bounds for Learning Truncated Gaussians
Ilias Diakonikolas, Daniel M. Kane, Thanasis Pittas, Nikos Zarifis
COLT 2024

Near-Optimal Algorithms for Gaussians with Huber Contamination: Mean Estimation and Linear Regression
Ilias Diakonikolas, Daniel M. Kane, Ankit Pensia, Thanasis Pittas
NeurIPS 2023

A Spectral Algorithm for List-Decodable Covariance Estimation in Relative Frobenius Norm
Ilias Diakonikolas, Daniel M. Kane, Jasper C.H. Lee, Ankit Pensia, Thanasis Pittas
NeurIPS 2023 (***Selected for Spotlight Presentation***)

SQ Lower Bounds for Learning Bounded Covariance GMMs
Ilias Diakonikolas, Daniel M. Kane, Thanasis Pittas, Nikos Zarifis
COLT 2023

Nearly-Linear Time and Streaming Algorithms for Outlier-Robust PCA
Ilias Diakonikolas, Daniel M. Kane, Ankit Pensia, Thanasis Pittas
ICML 2023

List-Decodable Sparse Mean Estimation via Difference-of-Pairs Filtering
Ilias Diakonikolas, Daniel M. Kane, Sushrut Karmalkar, Ankit Pensia, Thanasis Pittas
NeurIPS 2022 (***Selected for Oral Presentation***)

Robust Sparse Mean Estimation via Sum of Squares

Ilias Diakonikolas, Daniel M. Kane, Sushrut Karmalkar, Ankit Pensia, Thanasis Pittas

COLT 2022

Streaming Algorithms for High-Dimensional Robust Statistics

Ilias Diakonikolas, Daniel M. Kane, Ankit Pensia, Thanasis Pittas

ICML 2022

Statistical Query Lower Bounds for List-Decodable Linear Regression

Ilias Diakonikolas, Daniel M. Kane, Ankit Pensia, Thanasis Pittas, Alistair Stewart

NeurIPS 2021 (***Selected for Spotlight Presentation***)

The Optimality of Polynomial Regression for Agnostic Learning under Gaussian Marginals in the SQ Model

Ilias Diakonikolas, Daniel M. Kane, Thanasis Pittas, Nikos Zarifis

COLT 2021

Estimating the Number of Induced Subgraphs from Incomplete Data and Neighborhood Queries

Dimitris Fotakis, Thanasis Pittas, Stratis Skoulakis

AAAI 2021

PREPRINTS[*]

*Author names are listed in alphabetical order

Efficient Multivariate Robust Mean Estimation in Efron's Two-Groups Model	2024
Ilias Diakonikolas, Giannis Iakovidis, Daniel M. Kane, Thanasis Pittas	
Batch List-Decodable Linear Regression via Higher Moments	2024
Ilias Diakonikolas, Daniel M. Kane, Sushrut Karmalkar, Sihan Liu, Thanasis Pittas	
Clustering Mixtures of Bounded Covariance Distributions Under Optimal Separation	2023
Ilias Diakonikolas, Daniel M. Kane, Jasper C. H. Lee, Thanasis Pittas	

AWARDS

Research Assistant Sponsorship by the Institute for Foundations of Data Science (IFDS)	Fall 2024
Student Research Grants Competition (SRGC) Award	Fall 2023
Research Assistant Sponsorship by the Institute for Foundations of Data Science (IFDS)	Fall 2023
Bodossaki Foundation Fellowship	2022 - now
Gerondelis Foundation Scholarship	2021
Research Assistant Sponsorship by the Institute for Foundations of Data Science (IFDS)	Summer 2021
UW-Madison CS Departmental Research Fellowship	2020 - 2021

TEACHING

Teaching Assistant at UW-Madison

CS400 (Programming III)	Spring 2024
CS540 (Introduction to Artificial Intelligence)	Spring 2022

Grader at UW-Madison

CS639 (Introduction to Computational Learning Theory)	Fall 2023

Teaching Assistant at NTUA

Discrete Mathematics	Spring 2019
Algorithms and Complexity	Fall 2019
Introduction to Computer Programming	Fall 2018

INVITED TALKS

Nearly-Linear Time and Streaming Algorithms for Outlier-Robust PCA
Institute for Operations Research and the Management Sciences (INFORMS) October 2023

Near-Optimal Algorithms for Robust Statistics
Institute for Foundations of Data Science (IFDS) November 2023

SERVICE

Conference Reviewer: NeurIPS 2024, ICALP 2024, NeurIPS 2023, ICLR 2023, NeurIPS 2022, ICML 2022
Journal Reviewer: SIAM Journal on Mathematics of Data Science (SIMODS)

TECHNICAL SKILLS

Programming Languages and Applications: Python, C, C++, Java, Mathematica, MATLAB