# 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

**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

**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

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

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

**Clustering Mixtures of Bounded Covariance Distributions Under Optimal Separation**
Ilias Diakonikolas, Daniel M. Kane, Jasper C. H. Lee, Thanasis Pittas
Manuscript, 2023

## AWARDS

| | |
|---|---|
| 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

**Grader at UW-Madison**
CS639, Introduction to Computational Learning Theory — Fall 2023

**Teaching Assistant at UW-Madison**
CS400, Programming III — Spring 2024
CS540, Introduction to Artificial Inteligence — Spring 2022

**Teaching Assistant at NTUA**
Introduction to Computer Programming — Fall 2018
Discrete Mathematics — Spring 2019
Algorithms and Complexity — Fall 2019

## 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: ICALP 2024, NeurIPS 2023, ICLR 2023, NeurIPS 2022, ICML 2022

## TECHNICAL SKILLS

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