Konstantinos (Kostas) Stavropoulos

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Research Interests

Machine Learning; Robustness; Distribution Shift; Computational Learning Theory.

Education

University of Texas at Austin *2021–present*
Ph.D. student, Computer Science
Advisor: Adam Klivans

National Technical University of Athens (NTUA) *2015–2020*
Diploma in Electrical & Computer Engineering (5–year joint degree)
GPA: 9.76/10 (First in cohort)
Thesis: Learning rankings from incomplete samples
Advisor: Dimitris Fotakis

Awards and Fellowships

Apple Scholars in AI/ML PhD fellowship *2025*
Best paper award at Conference on Learning Theory (COLT) *2024*
Bodossaki Foundation fellowship *2022-25*
Leventis Foundation fellowship *2022-25*
Gerondellis Foundation fellowship *2022*
Scholarship award from Hellenic Professional Society of Texas *2022*
Award of Excellence from State Scholarships Foundation *2020*
for graduating first in my cohort within the nominal period of studies
Thomaideio Award from NTUA for highest GPA during a year *2019*
Award from Eurobank "The Great Moment for Education" *2015*
for graduating first in my high school

Publications

(alphabetical author order)

13. Learning Constant-Depth Circuits in Malicious Noise Models
Adam Klivans, Konstantinos Stavropoulos, Arsen Vasilyan
COLT 2025

12. Learning Neural Networks with Distribution Shift: Efficiently Certifiable Guarantees
Gautam Chandrasekaran, Adam Klivans, Lin Lin Lee, Konstantinos Stavropoulos
ICLR 2025

11. Learning Noisy Halfspaces with a Margin: Massart is No Harder than Random
Gautam Chandrasekaran, Vasilis Kontonis, Konstantinos Stavropoulos, Kevin Tian
NeurIPS 2024 ★ **Spotlight** ★

10. Tolerant Algorithms for Learning with Arbitrary Covariate Shift
Surbhi Goel, Abhishek Shetty, Konstantinos Stavropoulos, Arsen Vasilyan
NeurIPS 2024 ★ **Spotlight** ★

9. Efficient Discrepancy Testing for Learning with Distribution Shift
Gautam Chandrasekaran, Adam Klivans, Vasilis Kontonis,
Konstantinos Stavropoulos, Arsen Vasilyan
NeurIPS 2024

8. Smoothed Analysis for Learning Concepts with Low Intrinsic Dimension
Gautam Chandrasekaran, Adam Klivans, Vasilis Kontonis,
Raghu Meka, Konstantinos Stavropoulos
COLT 2024 ★ **Best Paper** ★

7. Learning Intersections of Halfspaces with Distribution Shift: Improved Algorithms and SQ Lower Bounds
Adam Klivans, Konstantinos Stavropoulos, Arsen Vasilyan
COLT 2024

6. Testable Learning with Distribution Shift
Adam Klivans, Konstantinos Stavropoulos, Arsen Vasilyan
COLT 2024

5. An Efficient Tester-Learner for Halfspaces
Aravind Gollakota, Adam Klivans, Konstantinos Stavropoulos, Arsen Vasilyan
ICLR 2024

4. Tester-Learners for Halfspaces: Universal Algorithms
Aravind Gollakota, Adam Klivans, Konstantinos Stavropoulos, Arsen Vasilyan
NeurIPS 2023 ★ **Oral** ★

3. Agnostically Learning Single-Index Models using Omnipredictors
Aravind Gollakota, Parikshit Gopalan, Adam Klivans, Konstantinos Stavropoulos
NeurIPS 2023

2. Learning and Covering Sums of Independent Random Variables with Unbounded Support
Alkis Kalavasis, Konstantinos Stavropoulos, Manolis Zampetakis
NeurIPS 2022 ★ **Oral** ★

1. Aggregating Incomplete and Noisy Rankings
Dimitris Fotakis, Alkis Kalavasis, Konstantinos Stavropoulos
AISTATS 2021

Preprints

P2. The Power of Iterative Filtering for Supervised Learning with (Heavy) Contamination
Adam Klivans, Konstantinos Stavropoulos, Kevin Tian, Arsen Vasilyan.
Under review. ArXiv preprint: [https://arxiv.org/abs/2505.20177]

P1. Testing Noise Assumptions of Learning Algorithms
Surbhi Goel, Adam Klivans, Konstantinos Stavropoulos, Arsen Vasilyan
Under review. ArXiv preprint: [https://arxiv.org/abs/2501.09189]

Talks

Efficiently Certifiable Guarantees for Learning with Distribution Shift *January 2025*
Archimedes Center for Research in AI, Data Science and Algorithms

Learning Intersections of Halfspaces with Distribution Shift: Improved Algorithms and SQ Lower Bounds *July 2024*
Conference on Learning Theory (COLT) 2024

Tester-Learners for Halfspaces: Universal Algorithms *December 2023*
Oral Presentation, NeurIPS 2023

Learning and Covering Sums of Independent Random Variables with Unbounded Support *December 2022*
Oral Presentation, NeurIPS 2022

Service and Teaching

Reviewing: COLT 2025, ICLR 2024, ICML 2024, NeurIPS 2023

Teaching Assistant, New Horizons Summer School in TCS *June 2023*

Teaching Assistant, UT Austin *Spring 2023*
Course: Principles of Machine Learning I: Honors (CS363H)
Instructor: Adam Klivans

Teaching Assistant, NTUA, Greece *Fall 2020 – Spring 2021*
Courses: Algorithms and Complexity, Discrete Mathematics
Instructor: Dimitris Fotakis

Languages and Skills

English (fluent), French (basic), Greek (native)
Python, LaTeX, C/C++