

Konstantinos Emmanouilidis

[Website](#) | [Email](#) | [Linkedin](#) | [GitHub](#)

RESEARCH INTERESTS

Theoretical Foundations of ML & AI, (Multi-agent) Optimization, Theoretical Computer Science

EDUCATION

University of Pennsylvania (UPenn) PhD in Computer & Information Sciences <ul style="list-style-type: none">○ Advisor: <i>Renè Vidal</i>	<i>05/2024 - current</i>
Johns Hopkins University (JHU) Master of Science in Computer Science	<i>08/2022 - 05/2024</i>
Democritus University Of Thrace (DUTH) BSc & MSc in Electrical and Computer Engineering <ul style="list-style-type: none">○ Advisors: <i>Pavlos Efraimidis, Dimitris Fotakis</i>○ Grade: <i>9.51 / 10.00 (top 0.001% in university's history)</i>	<i>10/2016 - 07/2021</i>

HONORS & AWARDS

• JHU Mathematical Institute for Data Science Fellowship (2x)	<i>2023, 2024</i>
• IEEEExtreme 14.0 Programming Competition, top 10% worldwide	<i>10/2020</i>
• International Mathematical Competition (IMC), Bronze Medal	<i>07/2019</i>
• South Eastern European Mathematical Olympiad (SEEMOUS), Bronze Medal	<i>03/2019</i>
• IEEE Region 8 Acceleration Entrepreneurship Program, 1st place	<i>12/2018</i>
• South Eastern European Mathematical Olympiad (SEEMOUS), Bronze Medal	<i>03/2018</i>
• NASA Space Apps Larisa, 3rd place	<i>03/2017</i>
• Regional Chess Competition, 1st place	<i>06/2014</i>

EXPERIENCE

University of Pennsylvania <ul style="list-style-type: none">○ <i>Research Associate in GRASP, Renè Vidal's Lab</i>○ <i>Working on Robustness of Deep Networks in Semantic Attacks</i>	<i>08/2024 - current</i>
Johns Hopkins University <ul style="list-style-type: none">○ <i>Research Assistant in Optimization & ML Lab (Advisor: Nicolas Loizou)</i>○ <i>Conducted research on large-scale Optimization methods for Multi-agent problems</i>	<i>08/2022 - 07/2024</i>
National Technical University of Athens, CoReLab <ul style="list-style-type: none">○ <i>Conducted research on opinion dynamics and characterised their convergence in graphs</i>○ <i>Advisor: Dimitris Fotakis</i>	<i>08/2020 - 07/2021</i>

PUBLICATIONS

5. Shuffling the Data, Stretching the Step-size: Sharper Bias In Constant Step-size SGD,
Konstantinos Emmanouilidis, Emmanouil V. Vlatakis, Renè Vidal
4. Certifiably Robust Classifiers: Bridging the Gap Between Theory and Practice,
Konstantinos Emmanouilidis, Renè Vidal, Nicolas Loizou
3. SSD: A Sparse Semantic Defense Against Semantic Adversarial Attacks to Image Classifiers,
Nghia Nguyen, Darshan Thaker, Konstantinos Emmanouilidis, Tianjiao Ding, Renè Vidal

2. Stochastic Extragradient with Random Reshuffling: Improved Convergence for VIs,
Konstantinos Emmanouilidis, Renè Vidal, Nicolas Loizou,
In the 27th International Conference of Artificial Intelligence and Statistics (AISTATS 2024)
1. Opinion Dynamics in Graphs with Hidden Links,
Undergraduate thesis, w/ Dimitris Fotakis, Pavlos Efraimidis

PROFESSIONAL SERVICE

- Reviewer: ICML 2024, ICLR (2024, 2026), AISTATS (2025, 2026), JMLR
- Organizer: Workshop on Machine Learning and Optimization, *IEEE CISS 2023*
- Volunteering:
 - DeepMath *Conference* 2024
 - Chairman, *IEEE DUTH Student Branch* 06/2019 - 08/2020
 - Founder of *IEEE DUTH Computer Chapter* 12/2019
 - Vice Chair for Technical Activities, *IEEE DUTH Student Branch* 11/2018 - 05/2019

TEACHING EXPERIENCE

- UPenn, Deep Generative Models, *Prof. Renè Vidal* 08/2025 - current
- JHU, Optimization for Data Science, *Prof. Nicolas Loizou* 08/2023 - 12/2023
- DUTH, Algorithms and Data Structures, *Prof. Pavlos Efraimidis* 10/2020 - 02/2021

TECHNICAL SKILLS

- Python, C++ (*intermediate*)
- Web: HTML, CSS, JavaScript, php (*advanced*)
- Frameworks: PyTorch, TensorFlow, Transformers, Numpy

MISCELLANEOUS

- Languages: English, German, French, Greek
- Interests: Piano, Guitar