# Konstantinos Emmanouilidis

Website • Email • Linkedin • GitHub

### **RESEARCH INTERESTS**

(Multi-agent) Optimization, Machine Learning Theory, Game Theory, Theoretical Computer Science

### **EDUCATION**

# Johns Hopkins University PhD Candidate, Department of Computer Science • Advisors: Nicolas Loizou, Rene Vidal National Technical University of Athens (NTUA) Visiting Student, CoReLab NTUA • Graduate Courses: Algorithms and Complexity, Advanced Algorithms • Advisor: Dimitris Fotakis

# **Democritus University Of Thrace (DUTH)**

10/2016 - 07/2021

BSc & MSc in Electrical and Computer Engineering

• Grade: 9.51 / 10.00 (top 0.001% in university's history)

• Advisor: Pavlos Efraimidis

### HONORS & AWARDS

• JHU Mathematical Institute for Data Science, Spring 2024 Fellowship	01/2024
• JHU Mathematical Institute for Data Science, Summer 2023 Fellowship	02/2023
• IEEExtreme 14.0 Programming Competition, top 10% worldwide	10/2020
• International Mathematical Competition (IMC), Bronze Medal	07/2019
• South Eastern European Mathematical Olympiad (SEEMOUS), Bronze Medal	03/2019
• IEEE Region 8 Acceleration Program, 1st place	12/2018
• South Eastern European Mathematical Olympiad (SEEMOUS), Bronze Medal	03/2018
• NASA Space Apps Larisa, 3rd place	03/2017
European Parliament Euroscola Program	12/2016

# **PUBLICATIONS & RESEARCH PROJECTS**

 Stochastic Extragradient with Random Reshuffling: Improved Convergence for Variational Inequalities

Konstantinos Emmanouilidis, Rene Vidal, Nicolas Loizou, AISTATS 2024

• Opinion Dynamics in Graphs with Hidden Links, Undergraduate thesis, w/ Dimitris Fotakis, Pavlos Efraimidis

# **TEACHING EXPERIENCE**

• Optimization for Data Science, JHU, Prof. N. Loizou	08/2023 - 12/2023
• Algorithms and Data Structures DUTH, Prof. P. Efraimidis	10/2020 - 02/2021

### TECHNICAL SKILLS

- Python, C++ (*intermediate*)
- HTML, CSS, JavaScript, php (advanced)
- MATLab, Java (basic)

# **SELECTED TECHNICAL PROJECTS**

- Real vs fake Face Detection in images using neural networks
  Implemented in Python | Packages used: Tensorflow, Keras
- Image classification of different vehicles using SVMs (reached 98% accuracy)
  Implemented in Python | Packages used: OpenCV, Numpy | Github Repository
- RSA Cryptosystem with 2048-bit encryption
  Implemented in C++ | Packages used: Boost | Github Repository
- Implemented a recommendation system for movies and made hardware optimizations reducing its latency by 50%

Implemented in C++ | Packages used: VLSI Libraries | Github Repository

• Face Detection and eye tracking script for images or real time video Implemented in Python | Packages used: OpenCV | Github Repository

# **VOLUNTEERING EXPERIENCE**

•	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
•	Coordinator of "Learning to Code with Python" team, IEEE DUTH SB	10/2017 - 05/2018

# **MISCELLANEOUS**

• Languages: English, Greek, German, French

• Interests/Hobbies: Piano, Guitar