

Charilaos Pipis

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Education

Massachusetts Institute of Technology (MIT) 2023 – present

PhD in the EECS department

- Advised by [Costis Daskalakis](#) and [Gabriele Farina](#)
- Currently working on the theory of multi-agent learning and on causal inference

National Technical University of Athens (NTUA) 2018 – 2023

Diploma (5-year degree) in Electrical & Computer Engineering

- GPA: 9.7/10 (ranked 3rd out of 300 in my cohort)
- Final thesis project: Polynomial-Time Linear-Swap Regret Minimization in Imperfect-Information Sequential Games (published in NeurIPS 2023)

Bernoulli Center Summer School on Modern Trends in Combinatorial Optimization 18 – 22 July 2022
EPFL

Neuromatch Academy – Computational Neuroscience summer school 5 – 23 July 2021
(virtually), interactive track

- Syllabus: Machine Learning, Dynamical Systems, Stochastic Processes & Control
- Project: Use an image-change detection task in mice to predict novelty of stimuli based on neural activity
- Used Allen Institute dataset of large scale neuron recordings with Ca imaging in mice

Publications

1. **The Conflict Graph Design: Estimating Causal Effects under Arbitrary Neighborhood Interference** manuscript
([arxiv](#))
Vardis Kandiros, *Charilaos Pipis*, Constantinos Daskalakis, Christopher Harshaw
2. **Efficient Learning and Computation of Linear Correlated Equilibrium in General Convex Games** manuscript
Constantinos Daskalakis, Gabriele Farina, Maxwell Fishelson, *Charilaos Pipis*, Jon Schneider
3. **Polynomial-Time Computation of Exact Φ -Equilibria in Polyhedral Games** *Spotlight* NeurIPS 2024
([arxiv](#))
Gabriele Farina, *Charilaos Pipis*
4. **Polynomial-Time Linear-Swap Regret Minimization in Imperfect-Information Sequential Games** NeurIPS 2023
([arxiv](#))
Gabriele Farina, *Charilaos Pipis*
5. **Graph Connectivity With Noisy Queries** MFCS 2023
([arxiv](#))
Dimitris Fotakis, Evangelia Gergatsouli, *Charilaos Pipis*, Miltiadis Stouras, Christos Tzamos

Experience

Research Intern at EPFL (Summer@EPFL) *Lausanne, Switzerland*
July 11 – Sep 30, 2022
Scalable Computing Systems (SaCS) lab

- (1% selection rate, out of ~4000 applicants)
- Did research on quantifying the differential privacy of gossip networks
- Performed simulations, and pursued theoretical directions from an algorithmic perspective
- Learnt about differential privacy, spectral graph theory, expander graphs

Undergraduate Research Experience at NTUA

Computation and Reasoning Laboratory ([CoReLab](#))

Athens, Greece

2021 – 2022

- Team led by Prof. Dimitris Fotakis (NTUA) and Prof. Christos Tzamos (UoA)
- Problem: finding a spanning tree on a hidden graph by asking as few “edge existence” queries as possible on a noisy oracle
- Published in MFCS 2023

Software Engineer Intern at Bloomberg LP

FXGO Regulations team

(virtually) London, UK

July 1 – Sep 11, 2022

- Worked to future-proof the FX logging system to support any features that may complicate trading workflow
- Represented the different stages in FX trading lifecycle as nodes in directed graphs
- Integrated my code with the existing implementation and took decisions on implementation/design details

Undergraduate Research Assistant (Operations Research)

Athena Research Center & EmDot

Athens, Greece

March – June 2020

- Team led by Prof. D. Fotakis (NTUA) and Prof. I. Emiris (UoA) in collaboration with OR company EmDot
- Helped design and implement an approximation algorithm for a variant of the Capacitated Vehicle Routing Problem with Time Windows, which had NP-hard capacity constraints
- Our algorithm is now used by Hellenic Petroleum, daily, for the fuel distribution in the Greek market

Teaching Assistant in [AddisCoder](#) 2019

Addis Ababa, Ethiopia

July 20 – August 24, 2019

- A free intensive 4-week summer program in Addis Ababa, Ethiopia introducing high schoolers to Python programming and algorithms
- Helped students daily with algorithmic concepts they struggled most with, prepared practice tasks and learning material, graded exercises/exams

Honors/Awards

Onassis Foundation Scholarship

2024 – 2027

Paris Kanellakis Fellowship for first-year EECS students at MIT

2023 – 2024

IEEEExtreme 15.0 coding contest, 1st place in Greece, 1st in Europe, 17th worldwide out of ~5000 teams

IEEEExtreme 14.0 coding contest, 1st place in Greece, 2nd in Europe, 12th worldwide out of ~3500 teams

Silver Medalist, International Olympiad in Informatics (IOI) 2018

Tsukuba, Japan, Sep 2018

Bronze Medalist, International Olympiad in Informatics (IOI) 2017

Tehran, Iran, Aug 2017

Silver Medalist, Balkan Olympiad in Informatics (BOI) 2018

Timisoara, Romania, Jul 2018

Silver Medalist, Balkan Olympiad in Informatics (BOI) 2017

Chisinau, Moldova, Jul 2017

Bronze Medalist, Balkan Olympiad in Informatics (BOI) 2016

Nicosia, Cyprus, Jul 2016

Silver Medalist, Junior Balkan Olympiad in Informatics (JBOI) 2015

Ohrid, North Macedonia, Sep 2015

Projects

CanSat in Greece, Aerospace Competition

2017 & 2018

- Leader of a team of 6 members in 2017 & 14 members in 2018 (2nd place twice)
- We created a can-sized satellite using sensors and a microcontroller (Arduino), programmed in C++
- Also made a Python program to analyze data received by a ground (yagi) antenna in real time (eg. display trajectory of the satellite on Google Earth), while the satellite was descending after launch

[Kallinikos](#) platform containing Greek tutorials on algorithms and data structures: Contributing tutorials

Skills

Technical skills: C/C++ (proficient), Python (good knowledge), Java, pytorch, Matlab/Octave, SML, prolog, Unix/Linux, gtest/gmock, pytest, SQL, web development, embedded systems, assembly 8085/8086/AVR/MIPS

Languages: Greek (native), English (C2, proficient), German (B1 – Zertifikat)