Jason Milionis

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EDUCATION

Columbia University   September 2021 - Present
Ph.D. Student in Computer Science, M.Sc. in Computer Science (May 2022)   *New York, NY*

- Working with the CS Theory Group
- Ph.D. Advisors: Prof. Christos Papadimitriou & Prof. Tim Roughgarden

National Technical University of Athens (NTUA)   September 2016 - June 2021
B.Sc. & M.Eng.: Joint degree in Electrical & Computer Engineering   *Athens, Greece*

- 1st in class, GPA: 10.00/10.00
- Thesis: "Regression with unbounded covariates under differentially private learning constraints"
- Thesis Advisor: Prof. Dimitris Fotakis, CoReLab (Computation & Reasoning Laboratory)

PUBLISHED WORK

Complexity – Approximation Trade-offs in Exchange Mechanisms: AMMs vs. LOBs   FC 2023

- with Ciamac C. Moallemi, Tim Roughgarden

Automated Market Making and Loss-Versus-Rebalancing   ACM CCS DeFi 2022

- with Ciamac C. Moallemi, Tim Roughgarden, Anthony Lee Zhang
- Informed AMM design and ignited follow-up on approaches for mitigating Loss-Versus-Rebalancing

A Framework for Single-Item NFT Auction Mechanism Design   ACM CCS DeFi 2022

- with Dean Hirsch, Andy Arditi, Pranav Garimidi
- Practical impact of our work in using some of our novel designs for smart contract implementations: a16z/auction-zoo

Nash, Conley, and Computation: Impossibility and Incompleteness in Game Dynamics   SAGT 2022

- with Christos Papadimitriou, Georgios Piliouras, Kelly Spendlove

Differentially Private Regression with Unbounded Covariates   AISTATS 2022

- with Alkis Kalavasis, Dimitris Fotakis, Stratis Ioannidis

PROFESSIONAL & ADVISORY EXPERIENCE

Research Intern, Archimedes Research Center (Athens, Greece)   June 2022 - August 2022

- Research internship at the inaugural edition of the summer intern program of the Archimedes Research Center
- Working on the group of Optimization Theory

Uniswap Lead, Blockchain@Columbia   May 2022 - December 2022
Governance Protocol Leader   *New York, NY*

- **Advisor** on Uniswap Governance Proposals
- Posted technical opinions that helped shape decisions in the Uniswap Governance community (example)
- Mentored members on technical, societal aspects of governance, and treasury allocation for grant funding
- Interviewed candidates for board membership at the Blockchain Club, and planned board meeting agendas

Affiliate, Center for Digital Finance and Technologies   Sep 2022 - Present
School of Engineering and Applied Sciences, Columbia University   *New York, NY*

- Inaugural affiliate of the Center, invited by the Center Director, Prof. Agostino Capponi
- The Center leverages multi-disciplinary expertise at Columbia to advance the digital transformation of financial services for higher efficiency and security, increased accessibility, and greater social responsibility

Programming Experience & Analytical Skills: Proficient in Python, Haskell, C++, Matlab, Wolfram Mathematica, SQL, LaTeX

INVITED TALKS

CMU (Carnegie Mellon University) Crypto Seminar Series	October 27, 2022
Automated Market Making and Loss-Versus-Rebalancing (LVR)	*Pittsburgh, PA*
Panelist for CBER (Crypto and Blockchain Economics Research Forum) Symposium	October 20, 2022
Decentralized Exchanges	*Online*
Simons Institute for the Theory of Computing, University of Berkeley (UCB)	March 8, 2022
Dynamical Systems, Games, and Topology: a relationship in formation	*Berkeley, CA*
Columbia Theory Student Seminar	February 24, 2022
Dynamical Systems, Games, and Topology: an introduction	*New York, NY*

HONORS & AWARDS

Columbia CS Department Service Award — May 2022
In recognition of superior achievement and in honor of the integrity, curiosity, and creativity exhibited

General Michael Arnaoutis Foundation Scholarship — May 2021
Scholarship for post-graduate studies given to 3 students nationwide (in Greece)

Excellence Award (State Scholarships Foundation & Ministry of Education) — July 2022
For graduating 1st in the class of 2021 among all graduating students of the ECE School at NTUA

Chrisovergi and **Kondouli Honorary Awards** — March 2022
Awarded by NTUA Dean's Council for graduating 1st in class among all students of the Department of ECE and **across all Departments** of NTUA, respectively

Kary Honorary Award — 2016-2017, 2017-2018, 2018-2019, 2019-2020
Medal accompanying the award, awarded by the NTUA Dean's Council for the highest GPA among all classes of the ECE School at NTUA

Thomaidio Honorary Award — 2016-2017, 2017-2018, 2018-2019, 2019-2020
First Award by the NTUA Dean's Council for the highest GPA among all classes across NTUA Departments

Silver Medal (2018) and **Bronze Medal (2017)** in **SEEMOUS** representing Greece — 2017, 2018
(South Eastern European Mathematical Olympiad for University Students) — *North Macedonia & Romania*

Christos Papakyriakopoulos Honorary Award and **Nikolaos Kritikos Scholarship** — 2016-2017
For the best academic performance and excellence in Mathematics during the first year of studies at NTUA

TEACHING & VOLUNTEERING EXPERIENCE

Organizer, Columbia CS Theory Student Seminar — Fall 2022
- Found, assessed, and organized research talks to be given at the Columbia CS theory student weekly seminar

Teaching Assistant (TA), "Cryptography" — Fall 2020
- Created problem sets, held office hours, and graded assignments in this graduate-level course
- Lectured on blockchain consensus-related topics

TA, "Introduction to Programming" & "Programming Techniques" — Fall & Spring 2017-2020
- Assisted students with the laboratory exercises for the courses, and prepared course materials for teaching C & C++

Vice-Chair, IEEE NTUA Student Branch — October 2018 - January 2020
- Arranged technical talks by distinguished technological companies' guests, met with Dean to discuss future plans and funding of the branch, and managed yearly competitive programming contest
- While in office, our Branch was awarded the **IEEE Region 8 Exemplary Student Branch Award**.