

# Jason Milionis

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## EDUCATION

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### Columbia University

Ph.D. Student in Computer Science, M.Sc. in Computer Science (May 2022)

September 2021 - Present

*New York, NY*

- Working with the [CS Theory Group](#)
- Ph.D. Advisors: Prof. Christos Papadimitriou & Prof. Tim Roughgarden

### National Technical University of Athens (NTUA)

B.Sc. & M.Eng.: Joint degree in Electrical & Computer Engineering

September 2016 - June 2021

*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

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### [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 Ardit, 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

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### 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

*Governance Protocol Leader*

May 2022 - Present

*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

*School of Engineering and Applied Sciences, Columbia University*

Sep 2022 - Present

*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,  $\text{\LaTeX}$

## INVITED TALKS

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

## HONORS & AWARDS

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<b>Columbia CS Department Service Award</b> In recognition of superior achievement and in honor of the integrity, curiosity, and creativity exhibited	May 2022
<b>General Michael Arnaoutis Foundation Scholarship</b> Scholarship for post-graduate studies given to 3 students nationwide (in Greece)	May 2021
<b>Excellence Award (State Scholarships Foundation &amp; Ministry of Education)</b> For graduating 1st in the class of 2021 among all graduating students of the ECE School at NTUA	July 2022
<b>Chrisovergi and Kondouli Honorary Awards</b> Awarded by NTUA Dean's Council for graduating 1st in class among all students of the Department of ECE and <b>across all Departments</b> of NTUA, respectively	March 2022
<b>Kary Honorary Award</b> Medal accompanying the award, awarded by the NTUA Dean's Council for the highest GPA among all classes of the ECE School at NTUA	2016-2017, 2017-2018, 2018-2019, 2019-2020
<b>Thomaidio Honorary Award</b> First Award by the NTUA Dean's Council for the highest GPA among all classes across NTUA Departments	2016-2017, 2017-2018, 2018-2019, 2019-2020
<b>Silver Medal (2018) and Bronze Medal (2017) in SEEMOUS</b> representing Greece (South Eastern European Mathematical Olympiad for University Students)	2017, 2018 <i>North Macedonia &amp; Romania</i>
<b>Christos Papakyriakopoulos Honorary Award and Nikolaos Kritikos Scholarship</b> For the best academic performance and excellence in Mathematics during the first year of studies at NTUA	2016-2017

## TEACHING & VOLUNTEERING EXPERIENCE

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<b>Organizer, Columbia CS Theory Student Seminar</b> • Found, assessed, and organized research talks to be given at the Columbia CS theory student weekly seminar	Fall 2022
<b>Teaching Assistant (TA), "Cryptography"</b> • Created problem sets, held office hours, and graded assignments in this graduate-level course • Lectured on blockchain consensus-related topics	Fall 2020
<b>TA, "Introduction to Programming" &amp; "Programming Techniques"</b> • Assisted students with the laboratory exercises for the courses, and prepared course materials for teaching C & C++	Fall & Spring 2017-2020
<b>Vice-Chair, IEEE NTUA Student Branch</b> • 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 <b>IEEE Region 8 Exemplary Student Branch Award</b> .	October 2018 - January 2020