## Marios A. Papachristou (Last Updated: October 5, 2022)

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papachristoumarios

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Areas

Machine Learning, Data Mining, Algorithms, Social and Information Networks

EDUCATION

## Cornell University

2020 - exp. 2026

Ph.D. Candidate in Computer Science (GPA: 4.0/4.0), Minor: Applied Math

- Advisor: Jon Kleinberg, Committee: Jon Kleinberg, Emma Pierson, Sid Banerjee
- Relevant Coursework: Analysis of Algorithms, Information Networks, Numerical Methods for Data Science, Design of Online Marketplaces, ML Theory

M.S. in Computer Science, Minor: Applied Math (GPA: 4.0/4.0)

2020-2022

## National Technical University of Athens

2015-2020

Diploma in ECE (GPA: 9.49/10.00). Major: Computer Science.

- Thesis: "Stochastic Opinion Dynamics for Interest Prediction in Online Social Networks". Advisor: Dimitris Fotakis.

## **Publications**

- 1. Marios Papachristou, Rishab Goel, Frank Portman, Matt Miller, Rong Jin. "GLINKX: A Scalable Unified Framework for Homophilous and Heterophilous Graphs". Under Review, 2022.
- 2. Marios Papachristou, Sid Banerjee, Jon Kleinberg. "Dynamic Interventions for Networked Contagions". EAAMO 2022 (poster). [preprint] [code] [poster]
- 3. Marios Papachristou. Jon Kleinberg. "Core-periphery Models for Hypergraphs". KDD 2022.

[paper] [code] [data] [slides] [poster]

4. Marios Papachristou, Jon Kleinberg. "Allocating Stimulus Checks in Times of Crisis". WWW 2022. [preprint] [code] [paper] [talk] [slides]

5. Marios Papachristou. "Sublinear Domination and Core-periphery Networks". Scientific Reports (Nature), 2021. [paper] [code]

6.  $^{\alpha\beta}$ Apostolos Chalkis, Vissarion Fisikopoulos, **Marios Papachristou**, Elias Tsigaridas. "Truncated Log-concave Sampling with Reflective Hamiltonian Monte Carlo". Under Review, 2021.

[preprint] [code]

- 7. Marios Papachristou, Dimitris Fotakis. "Stochastic Opinion Dynamics for User Interest Prediction in Online Social Networks". Preprint, 2020. [preprint]
- 8. Marios Papachristou. "Software clusterings with vector semantics and the call graph". ESEC/FSE 2019.

[paper] [code] [data] (ESEC/FSE Student Research Competition Finalist Paper)

9. Vasilis Kostakis\*, and Marios Papachristou\*. "Commons-based peer production and digital fabrication: The case of a RepRap-based, Lego-built 3D printingmilling machine". Telematics and Informatics, 2014. [paper]

 $<sup>\</sup>alpha\beta$  = alphabetical order, \* = equal contribution

RESEARCH EXPERIENCE	Twitter Cortex (Research Internship)  May 2022 – August 2022  - Research on scalable machine learning on graphs. Development of a simple scalable method for node classification in homophilous and heterophilous graphs.	
	Cornell University (Graduate Research Assistant)  – Thesis research. Advisor: Jon Kleinberg.	2021 -
	GeomScale Organization  — Part-time research on sampling from truncated log-concave densities, and convex optimization, working on the volesti open-source package.	
	Business Analytics Lab (Undergraduate Researcher) 2018 Project: SADE. Architecture recovery via call graphs, source code embed and clustering methods.	
	Hellenic Center for Marine Research  June 2014 - August	t 2014
	P2P Lab (Remote Research Associate) 2013	3-2014
Professional Experience	Google Summer of Code 2020 (GeomScale)  June 2020- August	t 2020
	<ul> <li>Project: Sampling from high-dimensional truncated log-concave densities.</li> <li>[code] [talk1] [talk2]</li> </ul>	
	Google Summer of Code 2018 (GFOSS-OTA) April 2018-September	r 2018
	<ul> <li>Project: 3gm. Automated codification of Greek Legislation.</li> <li>[code] [data] [talk]</li> </ul>	
	Ratle (Co-founder) October 2017-October	r 2018
TEACHING		g 2017 g 2016 l 2017
Honors & Awards	<ul> <li>LinkedIn Ph.D. Fellowship (14.8&amp; acceptance rate)</li> <li>A.G. Leventis Scholarship (12.5% acceptance rate)</li> <li>Chateaubriand Fellowship (declined)</li> <li>Cornell Fellowship</li> <li>Thomaidion Award</li> <li>ESEC/FSE 2019 ACM Student Research Competition Finalist</li> <li>4th (out of 93) in International Space Engineering Competition (CanSat)</li> <li>2nd Award at the "be finnovative 2.0 accelerator"</li> <li>1st Award at "Crowdhackathon Fintech #2"</li> <li>Top %1 worldwide in IEEEXtreme 11.0 Programming Competition</li> <li>Touramanoglu Scholarship</li> <li>"The Great Moment of Education" Scholarship</li> </ul>	2022 2022 2022 2020 2019 2019 2019 2018 2017 2017 2015 2015
SERVICE	- Program Committee, FAccT '22	

SERVICE

- Program Committee. FAccT '22

- Reviewer. GLFrontiers@NeurIPS '22, JOSS, WHMD@NeurIPS '21, OR Spectrum

 $-\ Mentorship.$ 

• Google Summer of Code 2019–

o Cornell Unvergraduate Artificial Intelligence Group

2022-