# Marios A. Papachristou (Last Updated: July 21, 2022)

CONTACT Information E-mail GitHub Office Google Scholar

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Interests

Areas: Social and Information Networks, Machine Learning, Data Mining, Algorithms Foci: Statistical Modeling of Networks, Financial Networks, Graph ML

**EDUCATION** 

### Cornell University

2020 - exp. 2026

Ph.D. 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. Papachristou, Marios, Banerjee, Sid, and Kleinberg, Jon. "Dynamic Interventions for Networked Contagions". EAAMO 2022 (poster). [preprint] [code]
- Papachristou, Marios, and Kleinberg, Jon. "Core-periphery Models for Hypergraphs". KDD 2022.
   [paper] [code] [data]
- 3. Papachristou, Marios, and Kleinberg, Jon. "Allocating Stimulus Checks in Times of Crisis". WWW 2022.

  [preprint] [code] [paper] [talk] [slides]
- 4. Papachristou, Marios. "Sublinear Domination and Core-periphery Networks".

  Scientific Reports (Nature), 2021.

  [paper] [code]
- αβ Chalkis, Apostolos, Fisikopoulos Vissarion, Papachristou, Marios, and Tsigaridas, Elias. "Truncated Log-concave Sampling with Reflective Hamiltonian Monte Carlo". Preprint, 2021.
   [preprint] [code]
- 6. <u>Papachristou, Marios</u>, and Fotakis, Dimitris. "Stochastic Opinion Dynamics for User Interest Prediction in Online Social Networks". *Preprint*, 2020. [preprint]
- 7. Papachristou, Marios. "Software clusterings with vector semantics and the call graph". ESEC/FSE 2019.

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

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

 $^{\alpha\beta}$  = alphabetical order, \* = equal contribution

# RESEARCH EXPERIENCE

# Twitter Cortex (Research Internship)

May 2022 - August 2022

- Research on Graph ML on the UMR team.

### GeomScale Organization

May 2019 -

 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 - 2020

 Project: SADE. Architecture recovery via call graphs, source code embeddings, and clustering methods.

#### Hellenic Center for Marine Research

June 2014 - August 2014

P2P Lab (Remote Research Associate)

2013-2014

*Spring 2017* 

### Professional Experience

Google Summer of Code 2020 (GeomScale)

June 2020- August 2020

- Project: Sampling from high-dimensional truncated log-concave densities. [code] [talk1] [talk2]

# Google Summer of Code 2018 (GFOSS-OTA)

April 2018-September 2018

Project: 3gm. Automated codification of Greek Legislation.
 [code] [data] [talk]

## Ratle (Co-founder)

October 2017-October 2018

### Teaching

# Undergraduate Teaching Assistant (NTUA)

- Discrete Mathematics (4th Semester)

	- Programming Techniques (2nd Semester)  Spring	g 2016
	- Introduction to Computer Programming (1st Semester) Fall 2016, Fall	l 2017
Honors &	- LinkedIn Ph.D. Fellowship	2022
Awards	- Chateaubriand Fellowship (declined)	2022
	- Cornell Fellowship	2020
	- Thomaidion Award	2019
	<ul> <li>ESEC/FSE 2019 ACM Student Research Competition Finalist</li> </ul>	2019
	- 4th (out of 93) in International Space Engineering Competition (CanSat)	2019
	- 2nd Award at the "be finnovative 2.0 accelerator"	2018
	– 1st Award at "Crowdhackathon Fintech #2"	2017
	<ul> <li>Top %1 worldwide in IEEEXtreme 12.0 Programming Competition</li> </ul>	2017
	– Touramanoglu Scholarship	2015
	- "The Great Moment of Education" Scholarship	2015

# ACADEMIC SERVICE

- Program Committee. FAccT '22
- Reviewer. JOSS, WHMD@NeurIPS '21, OR Spectrum
- Mentor. Google Summer of Code Mentor
  - GeomScale organization

2021, 2022

 $\circ\,$  GFOSS-OTA

2019