MARIOS A. PAPACHRISTOU (Last Updated: September 15, 2022)

CONTACT Information E-mail GitHub Office papachristoumarios@cs.cornell.edu papachristoumarios 302 Gates Hall, Cornell University

Google Scholar Twitter

[profile] @papachristoum

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]
- 2. Papachristou, Marios, and Kleinberg, Jon. "Core-periphery Models for Hypergraphs". KDD 2022.

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

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]
- Papachristou, Marios, 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 scalable Graph Machine Learning.

GeomScale Organization

May 2020 -

 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

Honors & Awards

Undergraduate Teaching Assistant (NTUA) – Discrete Mathematics (4th Semester)

- A.G. Leventis Scholarship - Chateaubriand Fellowship (declined) - Cornell Fellowship - Thomaidion Award - ESEC/FSE 2019 ACM Student Research Competition Finalist - 4th (out of 93) in International Space Engineering Competition (CanSat) - 2nd Award at the "be finnovative 2.0 accelerator" - 2018 - 1st Award at "Crowdhackathon Fintech #2" - Top %1 worldwide in IEEEXtreme 11.0 Programming Competition 2022	- Programming Techniques (2nd Semester) Spring	g 2016
- A.G. Leventis Scholarship - Chateaubriand Fellowship (declined) - Cornell Fellowship - Cornell Fellowship - Thomaidion Award - ESEC/FSE 2019 ACM Student Research Competition Finalist - 4th (out of 93) in International Space Engineering Competition (CanSat) - 2nd Award at the "be finnovative 2.0 accelerator" - 2018 - 1st Award at "Crowdhackathon Fintech #2" - Top %1 worldwide in IEEEXtreme 11.0 Programming Competition 2027	- Introduction to Computer Programming (1st Semester) Fall 2016, Fal	l 2017
- A.G. Leventis Scholarship - Chateaubriand Fellowship (declined) - Cornell Fellowship - Cornell Fellowship - Thomaidion Award - ESEC/FSE 2019 ACM Student Research Competition Finalist - 4th (out of 93) in International Space Engineering Competition (CanSat) - 2nd Award at the "be finnovative 2.0 accelerator" - 2018 - 1st Award at "Crowdhackathon Fintech #2" - Top %1 worldwide in IEEEXtreme 11.0 Programming Competition 2027		
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 Cornell Fellowship Thomaidion Award ESEC/FSE 2019 ACM Student Research Competition Finalist 4th (out of 93) in International Space Engineering Competition (CanSat) 2019 2nd Award at the "be finnovative 2.0 accelerator" 1st Award at "Crowdhackathon Fintech #2" Top %1 worldwide in IEEEXtreme 11.0 Programming Competition 2017 	- A.G. Leventis Scholarship	2022
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- Top %1 worldwide in IEEEXtreme 11.0 Programming Competition 2017	- 2nd Award at the "be finnovative 2.0 accelerator"	2018
	- 1st Award at "Crowdhackathon Fintech #2"	2017
- Touramanoglu Scholarship 2015	- Top %1 worldwide in IEEEXtreme 11.0 Programming Competition	2017
To difference of the control of the	- Touramanoglu Scholarship	2015
- "The Great Moment of Education" 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
 GFOSS-OTA
 2021, 2022
 2019