Marios A. Papachristou (Last Updated: March 29, 2023)

CONTACT INFORMATION

E-mail	papachristoumarios@cs.cornell.edu
GitHub	papachristoumarios
Office	302 Gates Hall, Cornell University, 107 Hoy Rd
Google Scholar	[profile]
Twitter	@papachristoum
Website	papachristoumarios.github.io

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
  – *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.*
  – *Advisor:* Dimitris Fotakis

PUBLICATIONS
Google Scholar Profile
$^{\alpha\beta}$= alphabetical order,
* = equal contribution

1. **Marios Papachristou**, Amin Rahimian. "Production Networks Resilience: Cascading Failures, Power Laws and Optimal Interventions". *Under review.* 2023.
[preprint] [code]

2. **Marios Papachristou**, Sid Banerjee, Jon Kleinberg, "Optimal Resource Allocation for Remediating Networked Contagions". *Under review.* 2023. This paper incorporates and extends our previous papers: link and link.

3. **Marios Papachristou**, Sid Banerjee, Jon Kleinberg. "Dynamic Interventions for Networked Contagions". *WWW 2023.*
[preprint] [code] [poster]

4. **Marios Papachristou**, Rishab Goel, Frank Portman, Matt Miller, Rong Jin. "GLINKX: A Scalable Unified Framework for Homophilous and Heterophilous Graphs". *NeurIPS workshop on Graph Learning Frontiers (GLFrontriers)*, 2022.
[preprint] [poster] [workshop]

5. **Marios Papachristou**, Jon Kleinberg. "Core-periphery Models for Hypergraphs". *KDD 2022.*
[paper] [code] [data] [slides] [poster]

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

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

8. $^{\alpha\beta}$Apostolos Chalkis, Vissarion Fisikopoulos, **Marios Papachristou**, Elias Tsigaridas. "Truncated Log-concave Sampling for Convex Bodies with Reflective Hamiltonian Monte Carlo". *ACM Transactions on Mathematical Software*, 2023. This paper incorporates and supersedes our previous preprint.
[paper] [code]

9. **Marios Papachristou**, Dimitris Fotakis. "Stochastic Opinion Dynamics for User Interest Prediction in Online Social Networks". *Preprint*, 2020.
[preprint]

10. **Marios Papachristou**. "Software clusterings with vector semantics and the call graph". *ESEC/FSE 2019*.
[paper] [code] [data] **(ESEC/FSE Student Research Competition Finalist Paper)**

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

RESEARCH EXPERIENCE	**Twitter Cortex Applied Research**	*May 2022 – August 2022*

– Scalable Graph Machine Learning on graphs.

Cornell University   *May 2021 – May 2022*
– Graduate Research Assistant. Advisor: Jon Kleinberg.

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   *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*

OTHER 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 ASSISTANTSHIPS	– The Structure of Information Networks (PhD-level, Cornell)	*Spring 2023*
	– Discrete Mathematics (NTUA)	*Spring 2017*
	– Programming Techniques (NTUA)	*Spring 2016*
	– Introduction to Computer Programming (NTUA)	*Fall 2016, Fall 2017*

HONORS & AWARDS	– LinkedIn Ph.D. Fellowship (14.8% acceptance rate)	*2022*
	– Gerondelis Scholarship	*2022*
	– A.G. Leventis Scholarship (12.5% acceptance rate)	*2022*
	– Chateaubriand Fellowship *(declined)*	*2022*
	– Cornell Fellowship	*2020*
	– Thomaidion Award	*2019*
	– ESEC/FSE 2019 ACM Student Research Competition Finalist	*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*
	– Top %1 worldwide in IEEEXtreme 11.0 Programming Competition	*2017*
	– Touramanoglu Scholarship	*2015*

	– "The Great Moment of Education" Scholarship	*2015*

SERVICE	– *Program Committee.* FAccT '22
	– *Reviewer.* KDD '23, ECML-PKDD '23, GLFrontiers@NeurIPS '22, JOSS, WHMD@NeurIPS '21, OR Spectrum, Machine Learning
	– *Mentorship:* Google Summer of Code (2019–), Cornell Undergraduate AI Group (2022–), Student-applicant support program at Cornell CS (2022).