

# Marios Papachristou

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INFORMATION	GitHub	<a href="#">papachristoumarios</a>
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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*), 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)* *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. [\[preprint\]](#) [\[code\]](#) [\[slides\]](#)
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](#). [\[slides\]](#)
3. **Marios Papachristou**, Sid Banerjee, Jon Kleinberg. “Dynamic Interventions for Networked Contagions”. *ACM Web Conference (WWW) 2023*. [\[preprint\]](#) [\[code\]](#) [\[poster\]](#) [\[paper\]](#) [\[slides\]](#)
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 (GLFrontiers)*, 2022. [\[preprint\]](#) [\[poster\]](#) [\[workshop\]](#)
5. **Marios Papachristou**, Jon Kleinberg. “Core-periphery Models for Hypergraphs”. *ACM SIGKDD Intl. Conf. on Knowledge Discovery and Data Mining (KDD) 2022*. [\[paper\]](#) [\[code\]](#) [\[data\]](#) [\[slides\]](#) [\[poster\]](#)
6. **Marios Papachristou**, Jon Kleinberg. “Allocating Stimulus Checks in Times of Crisis”. *ACM Web Conference (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.

	<a href="#">[preprint]</a> 10. <b>Marios Papachristou</b> . “Software clusterings with vector semantics and the call graph”. <i>ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE) 2019</i> . <a href="#">[paper]</a> <a href="#">[code]</a> <a href="#">[data]</a> ( <i>ESEC/FSE Student Research Competition Finalist Paper</i> ) 11. Vasilis Kostakis*, and <b>Marios Papachristou*</b> . “Commons-based peer production and digital fabrication: The case of a RepRap-based, Lego-built 3D printing-milling machine”. <i>Telematics and Informatics</i> , 2014. <a href="#">[paper]</a>	
RESEARCH EXPERIENCE	<b>Microsoft Research (Office of Applied Research)</b> May 2023 –  <b>Twitter Cortex Applied Research</b> May 2022 – August 2022 – Scalable Graph Machine Learning on graphs.  <b>Cornell University</b> May 2021 – May 2022 – Graduate Research Assistant. Advisor: Jon Kleinberg.  <b>GeomScale Organization</b> May 2020 – – Part-time research on sampling from truncated log-concave densities, and convex optimization, working on the <a href="#">volesti</a> open-source package.  <b>Business Analytics Lab</b> 2018 – 2020 – <i>Project: SADE</i> . Architecture recovery via call graphs, source code embeddings, and clustering methods.  <b>Google Summer of Code 2020 (GeomScale)</b> June 2020 – August 2020 – <i>Project: Sampling from high-dimensional truncated log-concave densities</i> . <a href="#">[code]</a> <a href="#">[talk1]</a> <a href="#">[talk2]</a>  <b>Google Summer of Code 2018 (GFOSS-OTA)</b> April 2018–September 2018 – <i>Project: 3gm</i> . Automated codification of Greek Legislation. <a href="#">[code]</a> <a href="#">[data]</a> <a href="#">[talk]</a>  <b>P2P Lab (Remote Research Associate)</b> 2013 – 2014	
OTHER EXPERIENCE	<b>Ratle (Co-founder)</b> October 2017–October 2018	
TEACHING EXPERIENCE	– The Structure of Information Networks (PhD-level, Cornell) – Discrete Mathematics (NTUA) – Programming Techniques (NTUA) – Introduction to Computer Programming (NTUA)	Spring 2023 Spring 2017 Spring 2016 Fall 2016, Fall 2017
HONORS & AWARDS	– LinkedIn Ph.D. Fellowship (14.8% acceptance rate) – Gerondelis Scholarship – A.G. Leventis Scholarship (12.5% acceptance rate) – Chateaubriand Fellowship ( <i>declined</i> ) – 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 “ <i>be finnovative 2.0 accelerator</i> ” – 1st Award at “ <i>Crowdhackathon Fintech #2</i> ”	2022 2022 2022 2022 2020 2019 2019 2019 2018 2017

- Top %1 worldwide in IEEEExtreme 11.0 Programming Competition 2017
- Touramanoglu Scholarship 2015
- “The Great Moment of Education” Scholarship 2015

#### TALKS & PRESENTATIONS

- ***Resource Allocation in a Financial Contagion Environment***
  - CS6850 (Cornell; guest lecture) April 2023
  - Cornell Theory Seminar November 2022
- ***Dynamic Interventions for Networked Contagions***
  - ACM Web Conference April 2023
  - ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization October 2022
- ***Core-periphery Models for Hypergraphs***
  - ACM Conference on Knowledge Discovery and Data Mining August 2022
- ***GLINKX: A Scalable Unified Framework for Homophilous and Heterophilous Graphs***
  - NeurIPS Workshop on Graph Learning Frontiers December 2022
  - Twitter Machine Learning Seminar August 2022
- ***Allocating Stimulus Checks in Times of Crisis***
  - ACM Web Conference April 2022
  - ACM Conference on Equity and Access in Algorithms, Mechanisms, and Optimization October 2021
- ***Sampling from Truncated High Dimensional Logconcave Densities***
  - PyData Global December 2020
- ***Software Clusterings with Vector Semantics and the Call Graph***
  - ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering August 2019

#### SERVICE

- ***Program Committee***
  - ACM Conference on Fairness Accountability and Transparency (FAccT) 2022
  - ACM Conference on Knowledge Discovery and Data Mining (KDD) 2023
- ***Reviewing***
  - European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD) 2023
  - Machine Learning (Springer)
  - NeurIPS 2022 Workshop on Graph Learning Frontiers (GLFrontiers) 2022
  - NeurIPS 2021 Workshop on Human and Machine Decisions 2021–
  - Journal of Open Source Software 2021–
- ***Mentorship***
  - Student-applicant Support Program at Cornell CIS 2022
  - Cornell Undergraduate AI Group 2022–
  - Google Summer of Code 2019–2022

LAST UPDATED

May 26, 2023