

## Marios Papachristou

PERSONAL INFORMATION	E-mail	mpapachr@asu.edu
	Phone	(607)-262-5495
	Website	<a href="https://github.com/papachristoumarios">papachristoumarios.github.io</a>
	Nationality	Greek, US Permanent Resident (Green Card Holder)
RESEARCH INTERESTS	Algorithms, Network Economics, Supply Chains, Systemic Risk, LLMs, Differential Privacy, Machine Learning, Data Mining, Computational Social Science	
EMPLOYMENT	<b>W.P. Carey School of Business, Arizona State University</b>	2025 –
	Tenure-Track Assistant Professor, Department of Information Systems	
	<b>Microsoft Research</b>	Summer 2023
	Office of Applied Research, <i>with Chin-Chia Hsu and Longqi Yang</i>	
	<b>Twitter</b>	Summer 2022
	User Modeling Research Group, <i>with Rishab Goel, Frank Portman, Matt Miller</i>	
EDUCATION	<b>Cornell University</b>	2020 – 2025
	Ph.D. in Computer Science, Minor: <i>Applied Mathematics</i> – <i>Advisor: Jon Kleinberg</i>	
	M.S. in Computer Science	
		2020 – 2022
	<b>National Technical University of Athens</b>	2015 – 2020
	Diploma in Electrical and Computer Engineering – <i>Advisor: Dimitris Fotakis</i>	
SELECTED HONORS & AWARDS	– <b>LinkedIn Ph.D. Fellowship</b>	2022
	One-year fully funded fellowship by LinkedIn. Acceptance rate 14%.	
	– <b>Onassis Scholarship</b>	2023
	Three-year fellowship for Greek Ph.D. students. Acceptance rate: 16%.	
	– <b>A.G. Leventis Scholarship</b>	2022
	Award for graduate students of Greek origin. Acceptance rate 12.5%.	
	– <b>Bodossaki Foundation Fellowship</b>	2023
	Runner-up.	
	– <b>Chateaubriand Fellowship</b>	2022
	Fellowship granted by the French Embassy in the US for studies in France (declined for personal reasons). Acceptance rate 33%.	
	– <b>Cornell Fellowship</b>	2020
	One-year fully funded fellowship by the CS department based on “exceptional preparation and promise”.	
	– <b>IEEEExtreme 11.0 Programming Competition</b>	2017
	Top 1% worldwide in IEEE’s algorithms competition.	
PAPERS	<b>Journal Papers</b>	
<a href="#">Google Scholar Profile</a>	[J1] <b>volesti: A C++ library for sampling and volume computation on convex bodies</b>	
$\alpha\beta$ = alphabetical order	Apostolos Chalkis*, Vissarion Fisikopoulos*, <i>Marios Papachristou*</i> , Elias Tsigaridas*	
* = equal contribution		

PAPERS  
[Google Scholar Profile](#)  
 $\alpha\beta$  = alphabetical order  
 \* = equal contribution

- Journal of Open Source Software*, 2025  
[\[paper\]](#) [\[code\]](#)
- [J2] **Differentially Private Distributed Estimation and Learning**  
**Marios Papachristou**, Amin Rahimian  
*IJSE Transactions*, 2024  
*Featured at the July 2025 issue of the IJSE Magazine*  
[\[paper\]](#) [\[code\]](#) [\[talk\]](#)
- [J3] **Sublinear Domination and Core-periphery Networks**  
**Marios Papachristou**  
*Scientific Reports (Nature Portfolio)*, 2021  
[\[paper\]](#) [\[code\]](#)
- [J4] **Truncated Log-concave Sampling for Convex Bodies with Reflective Hamiltonian Monte Carlo**  
 <sup>$\alpha\beta$</sup> Apostolos Chalkis, Vissarion Fisikopoulos, **Marios Papachristou**, Elias Tsigaridas  
*ACM Transactions on Mathematical Software (TOMS)*, 2023  
[\[paper\]](#) [\[code\]](#)
- [J5] **Commons-based peer production and digital fabrication: The case of a RepRap-based, Lego-built 3D printing-milling machine**  
Vasilis Kostakis\*, and **Marios Papachristou\***  
*Telematics and Informatics*, 2014  
[\[paper\]](#)

#### Refereed CS Conference Proceedings

- [C1] **Leveraging Large Language Models for Collective Decision-Making**  
**Marios Papachristou**, Longqi Yang, Chin-Chia Hsu  
*ACM SIGCHI Conference on Computer-Supported Cooperative Work & Social Computing (CSCW)*, 2025  
*Invited talk at the LLMs as Research Tools Workshop at ACM CHI 2024*  
[\[preprint\]](#) [\[slides\]](#)
- [C2] **Dynamic Interventions for Networked Contagions**  
**Marios Papachristou**, Sid Banerjee, Jon Kleinberg  
*ACM Web Conference (WWW), Economics and Markets Track*, 2023  
[\[paper\]](#) [\[code\]](#) [\[poster\]](#) [\[slides\]](#)
- [C3] **Core-periphery Models for Hypergraphs**  
**Marios Papachristou**, Jon Kleinberg  
*ACM Intl. Conf. on Knowledge Discovery and Data Mining (KDD)*, 2022  
[\[paper\]](#) [\[code\]](#) [\[data\]](#) [\[slides\]](#) [\[poster\]](#)
- [C4] **Allocating Stimulus Checks in Times of Crisis**  
**Marios Papachristou**, Jon Kleinberg  
*ACM Web Conference (WWW), Economics and Markets Track*, 2022  
*Featured by the Federal Reserve Bank of Minneapolis*  
[\[paper\]](#) [\[code\]](#) [\[talk\]](#) [\[slides\]](#) [\[news\]](#)
- [C5] **Software Clusterings with Vector Semantics and the Call Graph**  
**Marios Papachristou**  
*ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE)*, 2019  
[\[paper\]](#) [\[code\]](#) [\[data\]](#)  
*(ESEC/FSE Student Research Competition Finalist Paper)*

#### Preprints & Working Papers

- [WP1] **Optimal Resource Allocation for Remediating Networked Contagions**  
*Marios Papachristou, Sid Banerjee, Jon Kleinberg*  
*Revised and Resubmitted, Management Science, 2024*  
[\[preprint\]](#) [\[slides\]](#)
- [WP2] **Group Decision-Making among Privacy-aware Agents**  
*Marios Papachristou, Amin Rahimian*  
*Revised and Resubmitted, Operations Research, 2024*  
*Preliminary version presented at the Theory and Practice of Differential Privacy Workshop (TPDP)*  
[\[preprint\]](#) [\[talk\]](#)
- [WP3] **Network Formation and Dynamics among Multi-LLMs**  
*Marios Papachristou, Yuan Yuan*  
*Working paper, 2024*  
*Preliminary version presented at the International Conference on Computational Social Science (IC2S2) and the NSF Conference in Network Science and Economics*  
[\[preprint\]](#) [\[code\]](#) [\[slides\]](#)
- [WP4] **Structural Measures of Resilience for Supply Chains**  
*Marios Papachristou, Amin Rahimian*  
*R&R, Management Science, 2024*  
[\[preprint\]](#) [\[code\]](#) [\[slides\]](#)
- [WP5] **The Power of Choice in Random Sampling**  
*Marios Papachristou, Jon Kleinberg*  
*Working paper, 2024*  
*Preprint available upon request*
- [WP6] **Echoes of Disagreement: Measuring Disparity in Social Consensus**  
*Marios Papachristou, Jon Kleinberg*  
*Working paper, 2024*  
[\[preprint\]](#) [\[code\]](#)

#### Refereed CS Workshops

- [W1] **GLINKX: A Scalable Unified Framework for Homophilous and Heterophilous Graphs**  
*Marios Papachristou, Rishab Goel, Frank Portman, Matt Miller, Rong Jin*  
*NeurIPS workshop on Graph Learning Frontiers (GLFrontiers), 2022*  
*Provisional patent application submitted*  
[\[paper\]](#) [\[poster\]](#)

#### Patents

- [P1] **GLINKX: A Scalable Unified Framework for Homophilous and Heterophilous Graphs**  
*Marios Papachristou, Rishab Goel, Frank Portman, Matt Miller, Rong Jin*  
*Provisional patent application submitted, 2022*

#### SOFTWARE

**volesti** [github.com/GeomScale/volesti](https://github.com/GeomScale/volesti)  
 Open-source C++ statistical software for sampling and volume approximation from convex bodies.

#### OTHER EXPERIENCE

**GeomScale Open-source Organization** *May 2020 – March 2020*  
 Sampling from truncated log-concave densities, and convex optimization, working on

the [volesti](#) open-source package *with Dr. Apostolos Chalkis, Dr. Vissarion Fisikopoulos, and Dr. Elias Tsigaridas*

**Cashierless Payments Start-up** 2017 – 2018  
Part of National Bank of Greece’s start-up accelerator

**Athens University of Economics and Business** 2018 – 2020  
Department of Management Science and Technology, *with Prof. Diomidis Spinellis*

**Google Summer of Code 2020 (GeomScale)** June 2020 – August 2020  
Sampling from high-dimensional truncated log-concave densities, *with Dr. Apostolos Chalkis, Dr. Vissarion Fisikopoulos, and Dr. Elias Tsigaridas*  
[\[code\]](#) [\[talk\]](#)

**Google Summer of Code 2018 (GFOSS-OTA)** April 2018–September 2018  
Automated codification of Greek Legislation, *with Prof. Diomidis Spinellis*  
[\[code\]](#) [\[data\]](#) [\[talk\]](#)

**Researcher – P2P Lab** 2013 – 2014

#### TEACHING & MENTORSHIP EXPERIENCE

- The Structure of Information Networks (PhD-level, Cornell) *Spring & Fall 2023*
- Discrete Mathematics (NTUA) *Spring 2017*
- Programming Techniques (NTUA) *Spring 2016*
- Introduction to Computer Programming (NTUA) *Fall 2016, Fall 2017*
- Student-applicant Support Program at Cornell CIS *2022*
- Google Summer of Code Mentor *2019–2022*
- Volunteer lessons for the National Olympiad of Informatics (PDP) *2019*

#### INVITED TALKS & LECTURES

<sup>†</sup>= scheduled

\*= presented by co-author

- **Resilience in Networks: Frameworks for Resource Allocation and Simulation**
  - Archimedes, Athena RC *April 2025*
  - TOC4Fairness Seminar, Simons Institute *March 2025*
  - Cornell University, Theory Seminar *December 2024*
  - Arizona State University, W.P. Carey School of Business *November 2024*
  - Purdue University, Daniels School of Business *November 2024*
  - MIT, Research Group Meeting *June 2024*
- **Network Formation and Dynamics among Multi-LLMs**
  - Arizona State University, Machine Learning Day *April 2025*
  - NSF Conference on Network Science and Economics *April 2025*
  - INFORMS Annual Meeting *October 2024*
  - IBM Research, Exploratory Math Sciences Council Seminar *April 2024*
  - UIUC, Guest Lecture at the Network Analysis Course *April 2024*
  - Cornell University, AIPP Group *March 2024*
  - Learning on Graphs (LoG) NYC Meetup *February 2024*
- **Information Aggregation and Distributed Learning in Privacy-critical Environments**
  - TOC4Fairness Online Seminar Series\* *March 2024*
  - Information: Theory and Applications (ITA) Workshop\* *February 2024*
  - Rutgers University Business School, Seminar\* *November 2023*
- **Leveraging Large Language Models for Collective Decision-Making**
  - LLMs as Research Tools: Applications and Evaluations in HCI Data Work  
Workshop, ACM Conference on Human-Computer Interaction\* *May 2024*
  - Microsoft Research, Invited Applied Research Talks *August 2023*
- **Structural Measures of Resilience for Supply Chains**

- NSF Conference on Network Science and Economics April 2024
- Columbia University, Student Theory Seminar November 2023
- Cornell University, Theory Tea November 2023
- INFORMS Annual Meeting\* October 2023
- Cornell University, LinkedIn Campus Visit May 2023
- **Resource Allocation in a Financial Contagion Environment**
  - University of Chicago, Theory Seminar October 2023
  - Indiana University, Center for Complex Networks and Systems Research September 2023
  - Cornell University, CS 6850 Guest Lecture April 2023
  - Cornell University, Theory Seminar November 2022
- **Dynamic Interventions for Networked Contagions**
  - INFORMS Annual Meeting October 2023
  - 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

PROFESSIONAL  
SERVICE

#### Program Committee

- ACM Conference on Fairness Accountability and Transparency (FAccT) 2022
- ACM Conference on Knowledge Discovery and Data Mining (KDD) 2023

#### Reviewer

- Mathematics of Operation Research (MOR) 2025
- Journal of Artificial Intelligence Research (JAIR) 2024
- Naval Research Logistics (NRL) 2024
- International Conference on Computational Social Science (IC2S2) 2024
- ACM Web Conference (WWW) 2024
- Innovations in Theoretical Computer Science (ITCS) 2024
- ACM Conference on Human Factors in Computing (CHI) 2024
- 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

LAST UPDATED

July 4, 2025