Marios Papachristou

Assistant Professor of Information Systems
W. P. Carey School of Business
Arizona State University

LAST UPDATED	January 25, 2026	

PERSONAL INFORMATION	E-mail	mpapachr@asu.edu
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	Nationality	Greek, US Permanent Resident (Green Card Holder)

RESEARCH

My research develops theory, algorithms, and AI-based simulations to model, predict, and intervene in complex networked sociotechnical systems, with applications to digital platforms, organizational decision-making, supply chains, and financial systems.

METHODS

Network Economics, Platforms, AI agents, Privacy, Computational Social Science

EMPLOYMENT

W.P. Carey School of Business, Arizona State University *2025 –*
Tenure-Track Assistant Professor, Department of Information Systems
- Affiliated Member, Center for AI and Data Analytics (AIDA)

Microsoft Research *Summer 2023*
Office of Applied Research, *with Chin-Chia Hsu and Longqi Yang*

Twitter *Summer 2022*
User Modeling Research Group, *with Rishab Goel, Frank Portman, Matt Miller*

EDUCATION

Cornell University *2020 – 2025*
Ph.D. in Computer Science, Minor: *Applied Mathematics*
- *Doctoral Advisor:* Jon Kleinberg
- *Thesis Title:* From Contagion to Stability: Insights into Network Dynamics, Resilience and Stability

M.S. in Computer Science *2020 – 2022*

National Technical University of Athens *2015 – 2020*
Diploma in Electrical and Computer Engineering
- *Advisor:* Dimitris Fotakis

HONORS & AWARDS

- **ACM Doctoral Dissertation Award Nominee** 2025
  Nominated to the ACM by Cornell's CS department as the best Ph.D. thesis in CS awarded in 2025.
- **ACM/AAAI SIGAI Doctoral Dissertation Award Nominee** 2025
  Nominated to the ACM SIGAI by Cornell's CS department as the best Ph.D. thesis in AI awarded in 2025.
- **Sigma Xi** 2025
  Elected member based on scientific contributions.
- **Cornell ORIE Young Researchers Workshop** 2024
- **Alexander A. Onassis Scholarship** 2023
  Three-year fellowship for Greek Ph.D. students. Acceptance rate: 16%.

- **Bodossaki Foundation Fellowship**   *2023*
  Runner-up.
- **LinkedIn Ph.D. Fellowship**   *2022*
  One-year fully funded fellowship by LinkedIn. Acceptance rate 14%.
- **A.G. Leventis Scholarship**   *2022*
  Award for graduate students of Greek origin. Acceptance rate 12.5%.
- **Gerondelis Scholarship**   *2022*
  One-time award for graduate students of Greek descent.
- **Chateaubriand Fellowship**   *2022*
  Fellowship granted by the French Embassy in the US for studies in France (declined for personal reasons). Acceptance rate 33%.
- **Cornell Fellowship**   *2020*
  One-year fully funded fellowship by the CS department based on "exceptional preparation and promise".
- **Thomaidion Award**   *2019*
  Awarded by NTUA for publication during undergraduate studies.
- **ESEC/FSE 2019 ACM Student Research Competition Finalist**   *2019*
- **CanSat International Space Engineering Competition**   *2019*
  4th out of 93 teams. Organized by the American Astronautical Society (AAS).
- **2nd prize "be finnovative 2.0" Start-up Accelerator by National Bank of Greece**
  2018
  Cashierless payments start-up.
- **1st prize at "Crowdhackathon Fintech #2" by the National Bank of Greece**
  2017
  Cashierless payments start-up.
- **IEEEXtreme 11.0 Programming Competition**   *2017*
  Top 1% worldwide in IEEE's algorithms competition.
- **Touramanoglu Scholarship**   *2015*
  Highest University Entrance Exams score in the Imittos region.
- **"The Great Moment of Education" Scholarship by Eurobank SA**   *2015*
  Highest University Entrance Exams score in the Imittos region.

JOURNAL PAPERS
Google Scholar Profile
$\alpha\beta$ = alphabetical order
* = equal contribution
° = corresponding author

[J1] **Network Formation and Dynamics among Multi-LLMs**
Marios Papachristou, Yuan Yuan
PNAS Nexus, 2025
[paper] [preprint] [code]
  - *Taught at UC Berkeley, Stanford, UIUC and others*
  - *Featured by TechXplore, and SingularityHub*

[J2] **Leveraging Large Language Models for Collective Decision-Making**
Marios Papachristou, Longqi Yang, Chin-Chia Hsu
Proceedings of the ACM on Human Computer Interaction (presented at ACM CSCW '25), 2025
[paper]
  - *Invited talk at the LLMs as Research Tools Workshop at ACM CHI 2024*
  - *Featured by the ACM*

[J3] **`volesti`: A C++ library for sampling and volume computation on convex bodies**
$\alpha\beta$Apostolos Chalkis*, Vissarion Fisikopoulos*, *Marios Papachristou*, Elias Tsigaridas*
Journal of Open Source Software, 2025
[paper] [code]

[J4] Differentially Private Distributed Estimation and Learning
Marios Papachristou, Amin Rahimian
IISE Transactions (formerly IIE Transactions), 2025
and the University of Pittsburgh Swanson School of Engineering
[paper] [code] [talk]
  – *Featured at the* July 2025 issue of the ISE Magazine *(10% of articles published in IISE Transactions)*
  – *Featured by the* University of Pittsburgh Swanson School of Engineering

[J5] Truncated Log-concave Sampling for Convex Bodies with Reflective Hamiltonian Monte Carlo
[αβ]Apostolos Chalkis, Vissarion Fisikopoulos, *Marios Papachristou*[°], Elias Tsigaridas
ACM Transactions on Mathematical Software (TOMS), 2023
[paper] [code]
  – *Featured at* ODBMS.org

[J6] Sublinear Domination and Core–periphery Networks
Marios Papachristou
Scientific Reports, 2021
[paper] [code]

[J7] 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]

TOP-TIER CS CONFERENCE PROCEEDINGS

[C1] Opinion Dynamics with Multiple Adversaries
Akhil Jalan*, *Marios Papachristou**[°]
Forthcoming at WWW '26: ACM Web Conference (WWW), 2026
[paper]
  – *Acceptance rate: 20%*

[C2] Dynamic Interventions for Networked Contagions
Marios Papachristou, Sid Banerjee, Jon Kleinberg
WWW '23: ACM Web Conference (WWW), 2023
[paper] [code]
  – *Acceptance rate: 17%*

[C3] Core-periphery Models for Hypergraphs
Marios Papachristou, Jon Kleinberg
KDD '22: ACM Intl. Conf. on Knowledge Discovery and Data Mining (KDD), 2022
[paper] [code] [data]
  – *Acceptance rate: 15%*
  – *Taught at tutorials at KDD and CIKM*

[C4] Allocating Stimulus Checks in Times of Crisis
Marios Papachristou, Jon Kleinberg
WWW '22: ACM Web Conference (WWW), 2022
[paper] [code]
  – *Acceptance rate: 17%*
  – *Featured by the* Federal Reserve Bank of Minneapolis
  – *Taught at UC Berkeley*

[C5] Software Clusterings with Vector Semantics and the Call Graph
Marios Papachristou
ESEC/FSE '19: ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2019
[paper] [code] [data]
  – *Acceptance rate: 21%*

– ESEC/FSE Student Research Competition Finalist Paper

REVISIONS &
WORKING PAPERS

[WP1] Structural Measures of Resilience for Supply Chains
Marios Papachristou, Amin Rahimian, Arash Azadegan
Major revision, Production and Operations Management, 2024
[preprint] [code] [slides]

[WP2] Echoes of Disagreement: Measuring Disparity in Social Consensus
Marios Papachristou, Jon Kleinberg
Major revision, INFORMS Journal of Computing, 2024
[preprint] [code]

[WP3] Optimal Resource Allocation for Remediating Networked Contagions
Marios Papachristou, Sid Banerjee, Jon Kleinberg
Under preparation for submission, 2025
[preprint] [slides]

[WP4] Differentially Private Distributed Inference
Marios Papachristou, Amin Rahimian
Under preparation for submission, 2025
Preliminary version presented at the Theory and Practice of Differential Privacy Workshop (TPDP)
[preprint] [talk]

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
[paper] [poster]

TUTORIALS

[T1] Differential Privacy for Strategic Information Sharing and Learning: Foundations, Mechanisms, and Applications
Amin Rahimian, Juba Ziani, *Marios Papachristou*, Yuxin Liu
Conference on Web and Internet Economics (WINE), 2025

WORKS IN
PROGRESS

[WIP1] Impact of Massive AI-generated Content on Recommender Systems
with Joonhwae Park, and Panos Adamopoulos

[WIP2] The Effects of Generative AI on Consumer Behavior
with Panos Adamopoulos, and Nikhil Garg

[WIP3] Pivot, Commit, or Wait? Evaluating non-Committal Learning Strategies in Digital Ventures
with Julian Lehmann, and Gerald Kane

[WIP4] Ambient Language Models; Learning to Talk; Learning to Talk by Looking at Noise
with Giannis Daras, Alkis Kalavasis, Costis Daskalakis, and Antonio Torralba

[WIP5] Optimal Resolution of a Data Sharing Trilemma: Statistical Power, Sample Complexity and Privacy Budget
with Yuxin Liu, Amin Rahimian, and Arash Azadegan

[WIP6] The Price of Misreporting: Measuring the Effect of Adversarial Behavior in Online Platforms
with Akhil Jalan

SOFTWARE	**volesti**	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*

MENTEES	– Joonhwae Park (Ph.D. student at Emory)
	– Yuxin Liu (Ph.D. student at the University of Pittsburgh)
	– Jasmine Li (Undergraduate Cornell CS)
	– Ioannis Iakovidis (Google Summer of Code 2022; now Ph.D. student at Johns Hopkins)
	– Zhang Zhuyan (Google Summer of Code 2022; now Technology analyst at Bank of America)

TALKS & LECTURES †= 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, School of Mathematical and Natural Sciences, AI Seminar	*November 2025*
	– INFORMS Annual Meeting	*October 2025*

- – Symposium on Statistical Challenges on Electronic Commerce Research (SCECR) *June 2025*
  - – 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*
  - – CMU, Tepper School of Business OM Seminar⋆ *September 2024*
  - – 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*

DEPARTMENTAL AND PROFESSIONAL SERVICE

Department and School Outreach

- Department of Information Systems Brown Bag Seminar Organizer [link]
- W. P. Carey School of Business, PhD Lunch and Learn, November 2025, Keynote Speaker [link]

Program Commitee

- ACM Conference on Fairness Accountability and Transparency (FAccT)
- ACM Conference on Knowledge Discovery and Data Mining (KDD)
- IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications (TPS)

Ad-hoc Reviewer

- MIS Quarterly
- Management Science
- Mathematics of Operation Research
- Journal of Artificial Intelligence Research
- Naval Research Logistics
- International Conference on Computational Social Science (IC2S2)
- ACM Web Conference (WWW)
- Innovations in Theoretical Computer Science (ITCS)
- ACM Conference on Human Factors in Computing (CHI)
- European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD)
- Machine Learning
- NeurIPS 2022 Workshop on Graph Learning Frontiers (GLFrontiers)
- NeurIPS 2021 Workshop on Human and Machine Decisions
- Journal of Open Source Software

Session Chair

- INFORMS Annual Meeting   *2025*
- NSF Confernce on Network Science and Economics   *2024*
- ACM Web Conference (WWW)   *2022*

REFERENCES

Jon Kleinberg (`kleinberg@cornell.edu`)
Dept. of Computer and Information Science, Cornell University

Siddhartha Banerjee (`sbanerjee@cornell.edu`)
School of Operations Research and Information Engineering, Cornell University

Amin Rahimian (`rahimian@pitt.edu`)
Deptartment of Industrial Engineering, University of Pittsburgh

Yuan Yuan (`yuyuan@ucdavis.edu`)
OpenAI and Graduate School of Management, UC Davis

Longqi Yang (`longqi.yang@microsoft.com`)
Office of Applied Research, Microsoft Research

Chin-Chia Hsu (`chinchia.k.hsu@gmail.com`)
Google DeepMind

Yong-Yeol Ahn (`yyahn@virginia.edu`)
School of Data Science, University of Virginia