Marios Papachristou

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

LAST UPDATED October 13, 2026

PERSONAL INFORMATION

E-mail	mpapachr@asu.edu
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Google Scholar Profile	Google Scholar Profile
Campus Address	400 E Lemon St, BAC, Tempe, AZ 85281
US Status	US Permanent Resident (Green Card Holder)

RESEARCH

My research develops models for understanding and improving the *resilience* of modern socio-technical systems with downstream applications to platforms, supply chains, and organizations. I study the mechanisms causing fragility and devise analytical metrics to measure the resilience, prescriptive interventions, and decentralized decision-making under uncertainty and information constraints.

METHODS

Network Science, Algorithms, AI Agents, Privacy, Computational Social Science, ML

ACADEMIC APPOINTMENTS

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)
- *Graduate Faculty Member*, Data Science, Analytics and Engineering
- *Graduate Faculty Member*, Computer Science

Cornell University *Summer 2026*
Visiting Faculty

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".
- Nominated for the *ACM Doctoral Dissertation Award.*

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

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

RESEARCH HIGHLIGHTS

$^{\alpha\beta}$= alphabetical order *= equal contribution $^{\circ}$= corresponding author ‡= graduate student supervised

[H1] **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*

[H2] **The Power of Choice in Random Sampling and Applications to Platform Analytics**
Marios Papachristou, Jon Kleinberg

Major revision, Operations Research, 2025
[preprint]
– *Taught at the University of Pittsburgh*

[H3] **Structural Measures of Resilience for Supply Chains**
Marios Papachristou, Amin Rahimian, Arash Azadegan
Major revision, Production and Operations Management, 2025
[preprint] [code]

[H4] **The Price of Misreporting: Measuring the Effect of Strategic Behavior in Online Platforms**
Marios Papachristou, Akhil Jalan
Submitted, 2026
Preliminary version presented at the ACM Web Conference 2026
[preprint]

[H5] **Quantifying Consensus Disparity in Social and Information Networks**
Marios Papachristou, Jon Kleinberg
Major revision, INFORMS Journal of Computing, 2025
[preprint] [code]

[H6] **Data Regulation and the Microstructure of Clinical Trials**
Kyuyeon (Jenny) Rhee[‡], ***Marios Papachristou***, Tian Lu, Pei-yu Chen
Under preparation for submission, 2026
Preprint available upon request
– ***INFORMS eBusiness Best Paper Award Finalist (best paper or runner-up)***

Industry Employment

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*

Honors & Awards

– **INFORMS eBusiness Section Best Student Paper Award** *2026*
Finalist (best paper or runner-up).

– **ACM Doctoral Dissertation Award Nominee** *2025*
Nominated to the ACM by Cornell's CS department as one of the two best Ph.D. theses in engineering-related disciplines awarded in 2025.

– **Sigma Xi** *2025*
Elected member based on scientific contributions.

– **Cornell ORIE Young Researchers Workshop** *2024*
Invited workshop.

– **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*
Awarded 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*
Awarded one-time award for graduate students of Greek descent.

– **Chateaubriand Fellowship** *2022*
Awarded fellowship granted by the French Embassy in the US for studies in France (declined). Acceptance rate 33%.

– **Cornell Fellowship** *2020*
Awarded 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*
  Awarded 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*
  Awarded 2nd prize for our cashierless payments start-up.
- **1st prize at "Crowdhackathon Fintech #2" by the National Bank of Greece** *2017*
  Awarded 1dt prize for our cashierless payments start-up.
- **IEEEXtreme 11.0 Programming Competition** *2017*
  Awarded top 1% worldwide in IEEE's algorithms competition.
- **Touramanoglu Scholarship** *2015*
  Awarded for the highest University Entrance Exams score in the Imittos region.
- **"The Great Moment of Education" Scholarship by Eurobank SA** *2015*
  Awarded for the highest University Entrance Exams score in the Imittos region.

PUBLISHED PAPERS

Journal Papers

[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
[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**
$^{\alpha\beta}$Apostolos Chalkis, Vissarion Fisikopoulos, ***Marios Papachristou***$^{\circ}$, Elias Tsigaridas
ACM Transactions on Mathematical Software (TOMS), 2023
[paper] [code]
- *Featured at ODBMS.org*

[J6] **Sublinear Domination and Core–periphery Networks**
Marios Papachristou (solo-authored)
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****°
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 (solo-authored)
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

[R1] **The Power of Choice in Random Sampling and Applications to Platform Analytics**
Marios Papachristou, Jon Kleinberg
Major revision, Operations Research, 2025
[preprint]
– *Taught at the University of Pittsburgh*

[R2] **Structural Measures of Resilience for Supply Chains**
Marios Papachristou, Amin Rahimian, Arash Azadegan
Major revision, Production and Operations Management, 2025
[preprint] [code]

[R3] **Quantifying Consensus Disparity in Social and Information Networks**
Marios Papachristou, Jon Kleinberg
Major revision, INFORMS Journal of Computing, 2025
[preprint] [code]

[R4] **Differentially Private Distributed Inference for Multicenter Clinical Studies**
Marios Papachristou, Amin Rahimian
Minor Revision, INFORMS Journal on Data Science, 2026
Preliminary version presented at the Theory and Practice of Differential Privacy Workshop (TPDP)

and the Workshop on Information System Technologies (WITS)
[preprint]

Working papers

[WP1] **Data Regulation and the Microstructure of Clinical Trials**
Kyuyeon (Jenny) Rhee[‡], ***Marios Papachristou***, Tian Lu, Pei-yu Chen
Under preparation for submission, 2026
Preprint available upon request
– ***INFORMS eBusiness Best Paper Award Finalist (best paper or runner-up)***

[WP2] **The Price of Misreporting: Measuring the Effect of Strategic Behavior in Online Platforms**
Marios Papachristou, Akhil Jalan
Submitted to Management Science, 2026
Preliminary version presented at the ACM Web Conference 2026
[preprint]

[WP3] **Optimal Resource Allocation for Remediating Networked Contagions**
Marios Papachristou, Sid Banerjee, Jon Kleinberg
Submitted to Operations Research, 2026
[preprint]

[WP4] **From Thick Description To Computational Simulation: An Agentic Framework For Deriving Simulation Studies From Qualitative Research**
Julian Lehmann, David Dobolyi, ***Marios Papachristou***, Gerald Kane
Submitted to Information Systems Research, 2026
Preprint available upon request

[WP5] **Ambient LLMs: Data-Efficient Supervised Fine-tuning via Temperature Matching**
Giannis Daras, ***Marios Papachristou***, Adam Klivans, Antonio Torralba, Constantinos Daskalakis
Submitted to ICLR, Journal version preparation for submission to Management Science, 2026
Preprint available upon request

[WP6] **Optimizing Differentially Private Inference for Heterogeneous Data Partitions**
Amin Rahimian, ***Marios Papachristou***, Yuxin Liu
Submitted to AISTATS, 2026
Preprint available upon request

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

Published Software

volesti github.com/GeomScale/volesti
Open-source C++ statistical software for sampling and Bayesian inference.

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 (GLFrontriers), 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

TEACHING

Arizona State University, Instructor *Spring 2026*
CIS 509: Analytics for Unstructured Data

- Evaluation (out of 7.0, MSBA/MSBA/MSAIB): **6.8/7.0, 6.6/7.0, 6.4/7.0 (Spring 2026)**, Department Average: 6.2/7.0

Cornell University, Teaching Assistant *Spring 2023, Fall 2023*
CS 6850: The Structure of Information Networks (Ph.D.-level)

- Evaluation (out of 5.0): **5.0/5.0 (Spring 2023), 4.8/5.0 (Fall 2023)**

GRANTS

- **ALCF Director's Discretionary Allocation Award (DD Award)** *2026*
  Argonne Leadership Computing Facility. Project: Large-scale LLM-based Simulations for Algorithmic Auditing of Recommendation Systems

MENTEES

- Kyuyeon (Jenny) Rhee (Ph.D. student at ASU)
- Joonhwae Park (Ph.D. student at Emory)
- Victor Lee (Ph.D. student at ASU)
- Pin-Jun Liu (Ph.D. student at ASU)
- 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)

MENTORSHIP EXPERIENCE

- Student-applicant Support Program at Cornell CIS *2022*
- Google Summer of Code Mentor *2019 – 2022*
- Volunteer lectures for the Greek National Olympiad of Informatics (PDP) *2019*

INVITED TALKS & LECTURES

†= scheduled
⋆= presented by co-author

- ***The Price of Misreporting: Measuring the Effect of Strategic Behavior in Online Platforms***
  - Eller College of Management, University of Arizona† *November 2026*
  - Lerner-Warwick FinTech Workshop† *November 2026*
  - NYU Stern School of Business, WAICI Workshop† *September 2026*
- ***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*
  - Arizona State University, Machine Learning Day *April 2025*
  - IBM Research, Exploratory Math Sciences Council Seminar *April 2024*
  - UIUC, Guest Lecture at the Network Analysis Course *April 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*
  - Rutgers 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 Invited Talk, ACM Conference on Human-Computer Interaction⋆ *May 2024*
  - Microsoft Research, Invited Applied Research Talks *August 2023*
- ***Structural Measures of Resilience for Supply Chains***
  - Columbia University, Theory Seminar *November 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*
- ***GLINKX: A Scalable Unified Framework for Homophilous and Heterophilous Graphs***
  - Twitter, Machine Learning Seminar *August 2022*

Departmental And Professional Service

Department and School Outreach

- AI and Data Analytics Center (AIDA) Brown Bag Seminar Series Co-organizer [link]
- Department of Information Systems Brown Bag Seminar Co-organizer [link]
- W. P. Carey School of Business, PhD Lunch and Learn, November 2025, Speaker [link]

Program Committee

- ACM Conference on Fairness Accountability and Transparency (FAccT)
- ACM Conference on Knowledge Discovery and Data Mining (KDD)
- ACM Conference on Economics and Computation (EC)

Ad-hoc Reviewer

- Management Science
- MIS Quarterly
- INFORMS Journal on Computing
- INFORMS Journal on Data Science
- Mathematics of Operations Research
- ACM Transactions on Management Information Systems
- 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
- IEEE International Conference on Trust, Privacy and Security in Intelligent Systems, and Applications (TPS)

Session Chair

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

References

Available upon request.