CONTACT INFORMATION		
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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: 4.0/4.0*), 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

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. "Dynamic Interventions for Networked Contagions". *WWW 2023.*
   [preprint] [code] [poster]

3. **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]

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

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

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

7. $^{\alpha\beta}$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 (forthcoming)*, 2023. This paper incorporates and supersedes our previous preprint.
   [code]

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

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

10. 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]

$^{\alpha\beta}$= alphabetical order, * = equal contribution

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

– Research on *scalable machine learning on graphs*. Development of a simple scalable method for node classification in homophilous and heterophilous graphs. Paper and US patent submitted.

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).