# Marios A. Papachristou (Last Updated: July 26, 2022)


**Contact Information**

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**Interests**

*Areas:* Social and Information Networks, Machine Learning, Data Mining, Algorithms
*Foci:* Statistical Modeling of Networks, Financial Networks, Graph ML

**Education**

**Cornell University** *2020 – exp. 2026*
Ph.D. in Computer Science (*GPA: 4.0/4.0*), Minor: *Applied Math*
- *Advisor:* Jon Kleinberg, *Committee:* Jon Kleinberg, Emma Pierson, Sid Banerjee
- *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*.
- *Thesis: "Stochastic Opinion Dynamics for Interest Prediction in Online Social Networks". Advisor:* Dimitris Fotakis.

**Publications**

1. **Papachristou, Marios**, Banerjee, Sid, and Kleinberg, Jon. "Dynamic Interventions for Networked Contagions". *EAAMO 2022 (poster)*.
   [preprint] [code]
2. **Papachristou, Marios**, and Kleinberg, Jon. "Core-periphery Models for Hypergraphs". *KDD 2022*.
   [paper] [code] [data]
3. **Papachristou, Marios**, and Kleinberg, Jon. "Allocating Stimulus Checks in Times of Crisis". *WWW 2022*.
   [preprint] [code] [paper] [talk] [slides]
4. **Papachristou, Marios**. "Sublinear Domination and Core–periphery Networks". *Scientific Reports (Nature)*, 2021.
   [paper] [code]
5. $^{\alpha\beta}$Chalkis, Apostolos, Fisikopoulos Vissarion, **Papachristou, Marios**, and Tsigaridas, Elias. "Truncated Log-concave Sampling with Reflective Hamiltonian Monte Carlo". *Preprint*, 2021.
   [preprint] [code]
6. **Papachristou, Marios**, and Fotakis, Dimitris. "Stochastic Opinion Dynamics for User Interest Prediction in Online Social Networks". *Preprint*, 2020.
   [preprint]
7. **Papachristou, Marios**. "Software clusterings with vector semantics and the call graph". *ESEC/FSE 2019*.
   [paper] [code] [data] ***(Student Research Competition Finalist Paper)***
8. Kostakis, Vasilis, and **Papachristou, Marios**. "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 (Research Internship)** *May 2022 – August 2022*
- Research on Graph ML on the UMR team.

**Cornell University (Graduate Research Assistant)** *May 2021 –*

## Professional Experience

**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 (Undergraduate Researcher)** *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*

**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

**Undergraduate Teaching Assistant (NTUA)**
- Discrete Mathematics (4th Semester) *Spring 2017*
- Programming Techniques (2nd Semester) *Spring 2016*
- Introduction to Computer Programming (1st Semester) *Fall 2016, Fall 2017*

## Honors & Awards

- LinkedIn Ph.D. Fellowship *2022*
- A.G. Leventis Scholarship *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 12.0 Programming Competition *2017*
- Touramanoglu Scholarship *2015*
- "The Great Moment of Education" Scholarship *2015*

## Academic Service

- *Program Committee.* FAccT '22
- *Reviewer.* JOSS, WHMD@NeurIPS '21, OR Spectrum
- *Mentor.* Google Summer of Code Mentor
  - GeomScale organization *2021, 2022*
  - GFOSS-OTA *2019*