

Georgios Fragkos

RESEARCH & TEACHING ASSISTANT · COMPUTER NETWORKS & COMMUNICATION SYSTEMS

The University of New Mexico, Dept. of Electrical and Computer Engineering, Albuquerque, NM 87131, USA

☎ (+1) (505)-459-9573 | ✉ gfragkos@unm.edu | 🏠 geofragkos.github.io

Education

Ph.D.:

Albuquerque, NM, USA

Jan. 2019 - Present, Grad. Year -

Jan. 2023

THE UNIVERSITY OF NEW MEXICO

- **Laboratory:** Performance and Resource Optimization in Networks Lab (**PROTON LAB**)
- **Major Field Program:** Computer Engineering
- **Minor Field Program:** Electrical Engineering
- **Advisor:** Dr. Eirini Eleni Tsiropoulou (**Personal Website**)
- **Current GPA:** 4.33/4.00 (**With Honors**)

Diploma in Electrical & Computer Engineering (5-year joint degree)

Athens, Greece

Oct. 2012 - Oct. 2018

NATIONAL TECHNICAL UNIVERSITY OF ATHENS

- **Major Field:** Computer Science
- **Minor Field:** Computer Systems and Networks
- **Diploma Thesis:** "Development of distributed consensus methods using Blockchain technology integrated with Neo4j Graph Database"
- **Advisor:** Professor Theodora Varvarigou (**Personal Website**)
- **Co-Advisor:** Dr. Antonios Litke (**Google Scholar Site**)
- **GPA:** 7.82/10
- **Passed Nationwide University Entrance Examination with Score: 18.980/20.000 (estimate: top 1% nationwide)**

Research Experience

The University of New Mexico

Albuquerque, NM, USA

RESEARCH ASSISTANT, PERFORMANCE AND RESOURCE OPTIMIZATION LABORATORY (**PROTON LAB**)

Jan. 2019 - Present

- Studied Reinforcement Learning, Game Theory, Resource Orchestration in Interdependent Systems
- Studied Control of Resources for Public Safety Networks

TEACHING ASSISTANT, ECE DEPT.

September. 2019 - Present

1. ECE: 341 Communication Systems (Undergraduate Course - Fall 2019)

TEACHING ASSISTANT, ECE DEPT.

Jan. 2019 - May 2019

1. ECE: 440 / CS 485 Introduction to Computer Networks (Undergraduate Course - Spring 2019)

The National Technical University of Athens

Athens, Greece

RESEARCH ASSISTANT, INSTITUTE OF COMMUNICATIONS AND COMPUTER SYSTEMS (ICCS)

May 2017 - Dec. 2018

- Contributed to the EU Funded Horizon 2020 BLOOMEN Project - [**BLOOMEN Link**]
- Collaborating Institutes: Deutsche Welle, Wordline ATOS, ANT1 Cyprus, Kendraio, BMAT
- Studied and Developed distributed Blockchain-based applications for preserving media copyrights and systems' security
- Engineering Areas: Distributed Systems, Blockchain Technology, Graph Databases, Network Architecture and Security, Software Development, Python, Javascript, C, Solidity

European Organization for Nuclear Research (CERN)

Switzerland, Geneva

RESEARCH ASSISTANT, ATLAS EXPERIMENT

2016 - 2017

- Full Summer Internship as an undergraduate student provided by Brookhaven National Laboratory, New York, USA
- Contributed to the New Small Wheel Electronics Upgrade Project
- Developed tools for acquiring, analysing and presenting the data, coming from the ATLAS detector through the MMFE8 and the VMMs electronics
- Engineering Areas: Network Architecture and Design, Multithreaded Programming, Python, Qt

Skills

Programming	Python (Expert), Matlab (Expert), Java, C/C++, JavaScript, Qt, Solidity, HTML/XML, Prolog, LaTeX
Operating Systems	Linux, macOS, Windows
Software/Tools	Eclipse IDE, PyCharm IDE, NodeJS, Vue.js framework, Python Flask Microservice, Protege, Microsoft Visual Studio, Simulink, Mathematica, PSpice
Languages	Greek (Native), English(Full Proficient)

Research Interests

- Public Safety Networks
- Reinforcement Learning & Game Theory
- Optimization
- Resource Orchestration of Inderdependent Systems
- Distributed Decision Making

Publications

Journals

1. Fragkos, G.; Apostolopoulos, P.A.; Tsiropoulou, E.E. "ESCAPE: Evacuation Strategy through Clustering and Autonomous Operation in Public Safety Systems," in Future Internet 2019, 11, 20.

Conferences

1. Patrizi, N.; Fragkos, G.; Tsiropoulou, E.E. "A Reinforcement Learning Framework for Emergency Situations Management exploiting Contract Theory," in IEEE WCNEE 2020 (to be submitted)
2. Fragkos, G.; Chai, Y.; Tsiropoulou, E.E.; Veneris A. "Decentralized Oracles Voting Formulation based on Bayesian Belief in a Blockchain Setting," in IEEE ICBC 2020 (to be submitted)
3. Fragkos, G.; Lebien, S.; Tsiropoulou, E.E. "Incentivization of Mobile Edge Computing servers using Bayesian Learning Automata," in IEEE Transactions on Mobile Computing (to be submitted)
4. Fragkos, G.; Minwalla, C.; Plusquellic, J.; Tsiropoulou, E.E. "Reinforcement Learning Toward Decision-Making for Multiple Trusted-Third-Parties in PUF-Cash," in IEEE WF-IoT 2020 (under review)
5. Fragkos, G.; Patrizi, N.; Tsiropoulou, E.E.; Papavassiliou S. "Socio-aware Public Safety Framework Design: A Contract Theory based Approach," in IEEE ICC 2020 (under review)
6. Fragkos, G.; Kemp, N.; Tsiropoulou, E.E.; Papavassiliou S. "Artificial Intelligence Empowered UAVs Data Offloading in Mobile Edge Computing," in IEEE ICC 2020 (under review)
7. Apostolopoulos, P.A.; Fragkos, G.; Tsiropoulou, E.E.; Papavassiliou S. "Risk-aware Data Offloading in UAV-assisted Networks," in IEEE INFOCOM 2020 (under review)
8. Fragkos, G.; Tsiropoulou, E.E.; Papavassiliou S. "Disaster Management and Information Transmission Decision-making in Public Safety Systems," IEEE GLOBECOM 2019 (to appear)
9. Palaiokrassas G., Litke A., Fragkos G., Papaefthymiou V., Varvarigou T. "Deploying Blockchains for a New Paradigm of Media Experience," In: Coppola M., Carlini E., D'Agostino D., Altmann J., Bañares J. (eds) Economics of Grids, Clouds, Systems, and Services. GECON 2018. Lecture Notes in Computer Science, vol 11113. Springer, Cham
10. Fragkos G., Kapsoulis N., Litke A., Palaiokrassas G., Varvarigou T. "Anonymized Personalization for Distributed Applications over Blockchain," in Decentralized Conference 2018, Athens, Greece

Honors & Awards

2019	UNM Graduate Excellence Fellowship Offered the UNM Graduate Excellence Fellowship to enroll in the Master of Engineering Program	New Mexico, USA
2016	1st Place Award : Hackathon - The IoT Challenge @NTUA Awarded for best idea and implementation: Smart Home Sound Application for people with hearing impairment - [Project Link]	Athens, Greece
2006-2012	Awards of Excellence in High School 6 in total, from the Ministry of Education	Athens, Greece