

Panagiotis Michalopoulos

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Education

- 2021-2025 | **University of Toronto**
(exp.) Doctor of Philosophy
Areas of Research: Offline CBDCs | Secure Hardware | Identity Systems
- 2017-2020 | **Eindhoven University of Technology**
Master of Science in Embedded Systems
Major: Embedded Software
Thesis: Comparing Explanations for Black-box Intrusion Detection Systems
- 2012-2017 | **University of Patras**
Diploma of Electrical and Computer Engineering (MSc equiv.)
Major: Electronics & Computers
Thesis: Malware Evaluation Based on Behavioural Characteristics
- 2000-2012 | **Lycée Léonin de Patissia**

Work Experience

Teaching Assistant

University of Toronto, Sep 2021 - present

- Gave tutorials, supervised labs, developed exams, and graded exams & assignments.
- ECE345: Algorithms and Data Structures (Fall 2021, 2022, 2023)
- ECE344: Operating Systems (Fall 2022, 2023)
- ECE358: Foundations of Computing (Fall 2021)

Software Engineer

Intermediary Body of the Operational Program "Competitiveness and Entrepreneurship" (EFEPAE), Jan 2021 - May 2021

- Developed software modules for the Integrated State aid Information System.

Research Assistant

National Observatory of Athens, Jun 2020 - May 2021

- Developed a web application for managing and monitoring air quality measurements obtained from a sensor network.
- Developed linear models for the correction of low-cost sensor measurements against reference instruments.
- Performed simulations of atmospheric transport processes.

Projects & Activities

PANOPTIS (National Cybersecurity Exercise)

Member of the University of Patras CTF Team, 2017, 2018, 2020

- Organized by the Ministry of National Defence.
- Simulates a wide range of cybersecurity incidents, such as penetration testing, forensics, malware analysis.

Reverse engineering of a network protocol

Assignment for the Hacker's Hut course (2IMS20), Nov 2017 - Jan 2018

- Reverse engineered a network protocol for programming PLCs.
- Developed a Wireshark parser for SecurityMatters B.V.

Service & Volunteer Work

Reviewer

- IEEE Transactions on Network and Service Management

Conference Organizing Committees

- IEEE ICBC 2022 (IEEE International Conference on Blockchain and Cryptocurrency), *Webmaster*
- ECESCON 8 (ECE Students Conference), *IT Support*

Skills

Operating Systems:	FreeBSD, Linux, Windows, MS-DOS
Programming Languages:	Python, C/C++, Java, JavaScript, Solidity, Prolog, MS Visual Basic, C#, PHP
Tools:	Eclipse, MS Visual Studio, L ^A T _E X, Matlab, FLEXPART, IDA, ProVerif, AutoCAD, PSpice, MS Office, ReactJS, django
Languages:	Greek, English, French

Awards & Scholarships

- DiDi Graduate Award (CA\$10,000), Mar 2023

Publications

Journals

- [J1] Srisht Fateh Singh, Panagiotis Michalopoulos, and Andreas Veneris. “DEEPER: A shared liquidity decentralized exchange design for low trading volume tokens to enhance average liquidity”. In: *International Journal of Network Management* (Jan. 2024). ISSN: 1099-1190. DOI: 10.1002/nem.2261.
- [J2] Jemin Andrew Choi, Sidi Mohamed Beillahi, Srisht Fateh Singh, Panagiotis Michalopoulos, Peilun Li, Andreas Veneris, and Fan Long. “LMPT: A Novel Authenticated Data Structure to Eliminate Storage Bottlenecks for High Performance Blockchains”. In: *IEEE Transactions on Network and Service Management* (2023), pp. 1–1. ISSN: 2373-7379. DOI: 10.1109/tnsm.2023.3346202.
- [J3] James Meijers, Panagiotis Michalopoulos, Shashank Motepalli, Gengrui Zhang, Shiquan Zhang, Andreas Veneris, and Hans-Arno Jacobsen. “Blockchain for V2X: Applications and Architectures”. In: *IEEE Open Journal of Vehicular Technology* 3 (May 5, 2022), pp. 193–209. DOI: 10.1109/ojvt.2022.3172709.
- [J4] Dimitrios Serpanos, Panagiotis Michalopoulos, Georgios Xenos, and Vasilios Ieronymakis. “Sisyfos: A Modular and Extendable Open Malware Analysis Platform”. In: *Applied Sciences* 11.7 (Mar. 2021), p. 2980. DOI: 10.3390/app11072980.
- [J5] K. Dimitriou, A. Bougiatioti, M. Ramonet, F. Pierros, P. Michalopoulos, E. Liakakou, S. Solomos, P.-Y. Quehe, M. Delmotte, E. Gerasopoulos, M. Kanakidou, and N. Mihalopoulos. “Greenhouse gases (CO₂ and CH₄) at an urban background site in Athens, Greece: Levels, sources and impact of atmospheric circulation”. In: *Atmospheric Environment* 253 (Mar. 2021), p. 118372. ISSN: 1352-2310. DOI: 10.1016/j.atmosenv.2021.118372.
- [J6] Panayiotis Kalkavouras, Aikaterini Bougiatioti, Tareq Hussein, Nikos Kalivitis, Iasonas Stavroulas, Panagiotis Michalopoulos, and Nikolaos Mihalopoulos. “Regional New Particle Formation over the Eastern Mediterranean and Middle East”. In: *Atmosphere* 12.1 (Jan. 2021), p. 13. DOI: 10.3390/atmos12010013.
- [J7] Iasonas Stavroulas, Georgios Grivas, Panagiotis Michalopoulos, Eleni Liakakou, Aikaterini Bougiatioti, Panayiotis Kalkavouras, Kyriaki Maria Fameli, Nikolaos Hatzianastassiou, Nikolaos Mihalopoulos, and Evangelos Gerasopoulos. “Field Evaluation of Low-Cost PM Sensors (Purple Air PA-II) Under Variable Urban Air Quality Conditions, in Greece”. In: *Atmosphere* 11.9 (Aug. 2020), p. 926. DOI: 10.3390/atmos11090926.

Conferences

- [C1] Panagiotis Michalopoulos, Srisht Fateh Singh, and Andreas Veneris. “Inducing Trust in Blockchain-enabled IoT Marketplaces Through Reputation and Dispute Resolution”. In: *2023 IEEE International Conference on Metaverse Computing, Networking and Applications (MetaCom)*. IEEE, June 2023. DOI: 10.1109/metacom57706.2023.00076.
- [C2] Srisht Fateh Singh, Panagiotis Michalopoulos, Sidi Mohamed Beillahi, Andreas Veneris, and Fan Long. “Möbius: an Atomic State Sharding Design for Account-Based Blockchains”. In: *2023 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*. IEEE, May 2023. DOI: 10.1109/icbc56567.2023.10174978.
- [C3] Srisht Fateh Singh, Panagiotis Michalopoulos, and Andreas Veneris. “DEEPER: Enhancing Liquidity in Concentrated Liquidity AMM DEX via Sharing”. In: *2023 IEEE International Conference on Blockchain and Cryptocurrency (ICBC)*. IEEE, May 2023. DOI: 10.1109/icbc56567.2023.10174969.
- [C4] Panagiotis Michalopoulos, James Meijers, Srisht Fateh Singh, and Andreas Veneris. “A V2X Reputation System with Privacy Considerations”. In: *2022 IEEE 13th International Conference on Software Engineering and Service Science (ICSESS)*. IEEE, Oct. 2022. DOI: 10.1109/icseess54813.2022.9930178.
- [C5] Panagiotis Michalopoulos, Vasileios Ieronymakis, Muhammad T. Khan, and Dimitrios Serpanos. “An Open Source, Extensible Malware Analysis Platform”. In: *Proceedings of the 5th International Conference of Engineering Against Failure (ICEAF-V 2018)*. Vol. 188. EDP Sciences, June 2018, p. 05009. DOI: 10.1051/mateconf/201818805009.