

Eleftherios Zacharioudakis, PhD

Cybersecurity research | Cryptography | Dependable computing

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Profile

Computer-security academic with a PhD in Computer Engineering, research in remote-user authentication and reliable computing, and university teaching and postgraduate supervision. Visiting Lecturer at AUB Mediterraneo; previously Assistant Professor of Cybersecurity at Neapolis University Pafos.

Academic experience

Visiting Lecturer, Computer Science

American University of Beirut - Mediterraneo | September 2025 - present

Instructor named for Digital Systems Design Lab (CSEN 203L), Fall 2025.

Assistant Professor of Cybersecurity

Neapolis University Pafos | February 2023 - June 2025

Named instructor for postgraduate Information Security (DIS504). Supervised master's research on smart embedded systems and digital healthcare in 2025.

Visiting Lecturer, Computer Science

Neapolis University Pafos | December 2019 - February 2023

Supervised master's theses on intrusion detection using artificial immune systems (2021) and network reliability and information protection (2022).

Selected research contributions

Shared security operations for smaller organizations (2025)

Co-authored a shared SOC model addressing the cost of security operations for small and medium-sized enterprises. The framework considers multi-tenant architecture, privacy and regulatory requirements; implementation and empirical evaluation are proposed as next steps. [Paper](#)

Reliability models for fault-tolerant computers (2026)

Co-authored a method for modeling how multiprocessor systems share reserve processors across subsystems. The paper develops a graph-logical construction algorithm and checks model correctness through examples and experiments. [Paper](#)

Efficient authentication for remote users (2017)

Proposed a zero-knowledge authentication method using one-way Boolean transformations and standard hash functions. The study describes user registration and authentication procedures and compares their computational requirements with earlier approaches. [Paper](#)

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Research methods and subject areas

Cryptographic authentication; one-way Boolean and Galois-field transformations; graph-logical modeling; reliability analysis; scientific literature review; security architecture concepts. Research topics also include IoT cryptoprocessors, LLM applications in cyber defense and edge-cloud resource management.

Education

PhD, Computer Engineering | 2018

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Master’s in Public Administration | 2014

Neapolis University Pafos

MSc, Computer Engineering | 1999

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

BSc, Computer Engineering | 1997

National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute”

Teaching and research supervision

Postgraduate Information Security at Neapolis University Pafos; Digital Systems Design Lab at AUB Mediterraneo. Additional instructor assignment in the published BSc curriculum: AI-Enhanced Cybersecurity, 6 ECTS.

Selected MSc supervision covers intrusion detection, network reliability, smart embedded systems and smart-hospital technology. Educational research includes WOLFRAM, an interactive cellular-automata learning prototype, and a secure AI-integrated classroom assistant.

Academic leadership and service

Conference Co-Chair, [EMCIS 2025](#) (2025).

Technical Program Committee, [ISIoT 2025](#) (2025).

Program Committee, [edu4AI 2025](#) (2025).

Additional selected publications

Intelligent Cyber Defense: Leveraging LLMs for Real-Time Threat Detection and Analysis. [EMCIS 2024](#) · Lecture Notes in Business Information Processing (2025).

XMeta-OS: A Conceptual Framework for Unified Resource Management in Distributed Edge-Cloud Environments. [ACR 2025](#) · Lecture Notes in Networks and Systems (2025).

Exploration of the Role of Cryptoprocessors in Advancing IoT Security. [IEEE DCOSS-IoT 2024](#) (2024).

Complete publication record: [Google Scholar](#) | [ORCID](#)