

# Eleftherios Zacharioudakis, PhD

## Academic curriculum vitae

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Also publishing as Lefteris Zacharioudakis.

## Research interests

Secure authentication and cryptographic methods; Boolean and Galois-field transformations; fault-tolerant multiprocessor systems and reliability modeling; shared security operations; AI applications in cyber defense; distributed edge-cloud systems.

## Academic appointments

### Visiting Lecturer, Computer Science

American University of Beirut - Mediterraneo  
September 2025 - present

### Assistant Professor of Cybersecurity

Neapolis University Pafos  
February 2023 - June 2025

### Visiting Lecturer, Computer Science

Neapolis University Pafos  
December 2019 - February 2023

Earlier visiting academic work at Igor Sikorsky Kyiv Polytechnic Institute is listed in the institutional CV from October 2015; an end date is not specified.

## Education

### PhD, Computer Engineering | 2018

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"  
Research on efficient user identification in distributed systems, using Boolean and Galois-field transformations.

### Master's in Public Administration | 2014

Neapolis University Pafos  
Thesis on security in digital education, legal frameworks and risk mitigation.

### MSc, Computer Engineering | 1999

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"  
Thesis on security in corporate networks.

### BSc, Computer Engineering | 1997

National Technical University of Ukraine "Igor Sikorsky Kyiv Polytechnic Institute"

## Selected teaching

### Digital Systems Design Lab - CSEN 203L

AUB Mediterraneo | Undergraduate

Instructor | Fall 2025

Digital systems laboratory.

### Information Security - DIS504

Neapolis University Pafos | Postgraduate · 7.5 ECTS

Named instructor | Published syllabus, 2025

Access control, authentication, network security, cryptography, risk management and incident response.

### AI-Enhanced Cybersecurity - BSc Computer Science and Artificial Intelligence

Neapolis University Pafos | Undergraduate · 6 ECTS

Listed instructor | Published curriculum

Cybersecurity foundations, intrusion detection, secure communication and incident response. Listed curriculum assignment; teaching term is not specified.

## Selected master's thesis supervision

MSc in Information Systems and Digital Innovation, Neapolis University Pafos. English thesis titles below are translations.

### Emmanouil Roumeliotis (2025)

Technological Support for Smart Embedded Systems

### Eirini Markou (2025)

The Need for a Smart Hospital in Greece: Integrating Modern Technologies and Enhancing Healthcare

### Giannakis Charalambous (2022)

Network Reliability Problems and Information Protection

### Athanasios Tsironis (2021)

Intrusion Detection Algorithms in Information Networks Based on Artificial Immune Systems

## Academic service

### Conference Co-Chair - EMCIS 2025

European Mediterranean & Middle Eastern Conference on Information Systems

Paphos, Cyprus | September 11-12, 2025

### Technical Program Committee - ISIoT 2025

7th International Workshop on Intelligent Systems for the Internet of Things · co-located with DCOSS-IoT  
Lucca, Italy | June 9-11, 2025

### Program Committee - edu4AI 2025

2nd International Workshop on Education for Artificial Intelligence · co-located with ECAI  
Bologna, Italy | October 26, 2025

## Publications

Journal articles, conference and workshop papers, and theses. Publisher metadata is used where available. Original-language titles are retained; English descriptions are supplied in italics.

### Journal articles

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Alexei M. Romankevich, Daniil V. Halytsky, Lefteris Zacharioudakis (2026). **A generalized method for constructing failure-behavior models of fault-tolerant multiprocessor systems with inter-subsystem redundancy.** Applied Aspects of Information Technology, 9(3), pp. 366-383. DOI: [10.15276/aaait.09.2026.25](https://doi.org/10.15276/aaait.09.2026.25)

Vitaliy Romankevich, Kostiantyn Morozov, Alexei Romankevich, Petro Malezhyk, Lefteris Zacharioudakis (2026). **A Generalized Method for Constructing Graph- Logical Models of Non-Basic Fault-Tolerant Multiprocessor Systems via Model Combination.** International Journal of Engineering and Manufacturing. DOI: [10.5815/ijem.2026.03.15](https://doi.org/10.5815/ijem.2026.03.15)

Vitaliy Romankevich, Kostiantyn Morozov, Alexei Romankevich, Daniil Halytsky, Lefteris Zacharioudakis (2026). **A method for constructing non-basic GL-models by combining models with arbitrary graph structures.** Herald of Advanced Information Technology, 9(1), pp. 30-45. DOI: [10.15276/hait.09.2026.03](https://doi.org/10.15276/hait.09.2026.03)

Malamati Kourti, Lefteris Zacharioudakis, Annita Kolnagou, Iliada Evripidou, George J. Kontoghiorghe (2026). **Insights into the Complexities of Pharmacotherapy Parameters in Artificial Intelligence Models for Drug Selection, Precision Personalised Medicine and Optimal Therapeutic Outcomes.** Pharmaceutics, 18(9), article 1157. DOI: [10.3390/pharmaceutics18091157](https://doi.org/10.3390/pharmaceutics18091157)

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Daniil V. Halytsky, Ihor A. Yermolenko, Lefteris Zacharioudakis (2025). **A method for constructing GL-models of behavior under failure flow for complex non-basic fault-tolerant multiprocessor systems.** Applied Aspects of Information Technology, 8(4), pp. 465-480. DOI: [10.15276/aaait.08.2025.30](https://doi.org/10.15276/aaait.08.2025.30)

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Oleksii V. Romankevich, Lefteris Zacharioudakis (2024). **Ambiguities and their emergence conditions in self-testing of multiprocessor systems.** Herald of Advanced Information Technology, 7(4), pp. 405-413. DOI: [10.15276/hait.07.2024.29](https://doi.org/10.15276/hait.07.2024.29)

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Andrii P. Feseniuk, Alexei M. Romankevich, Lefteris Zacharioudakis (2024). **On evaluation of reliability increase in fault-tolerant multiprocessor systems.** Applied Aspects of Information Technology, 7(1), pp. 81-95. DOI: [10.15276/aaait.07.2024.7](https://doi.org/10.15276/aaait.07.2024.7)

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Alexei M. Romankevitch, Anna V. Morozova, Lefteris Zacharioudakis (2024). **On the method of building of non-basic GL-models which are formed on combination of edge functions of basic models.** Applied Aspects of Information Technology, 7(2), pp. 175-188. DOI: [10.15276/aaait.07.2024.13](https://doi.org/10.15276/aaait.07.2024.13)

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Alexei M. Romankevich, Anna V. Morozova, Lefteris Zacharioudakis (2024). **On the modification of GL-models by adding edges to a cyclic graph.** Herald of Advanced Information Technology, 7(2), pp. 185-198. DOI: [10.15276/hait.07.2024.13](https://doi.org/10.15276/hait.07.2024.13)

Vitalii O. Romankevych, Ivan V. Mozghovyi, Pavlo A. Serhiienko, Lefteris Zacharioudakis (2023). **Decompressor for hardware applications.** Applied Aspects of Information Technology, 6(1), pp. 74-83. DOI: [10.15276/aaait.06.2023.6](https://doi.org/10.15276/aaait.06.2023.6)

ОП Марковський, Л Захаріудакіс, ВР Максимук (2017). **Використання алгебри полів Галуа для реалізації концепції нульових знань при ідентифікації та автентифікації віддалених користувачів**. Electronic Modeling, 39(6), pp. 33-46. DOI: 10.15407/emodel.39.06.033

*English: Using Galois-field algebra for zero-knowledge identification and authentication of remote users*

Eleftherios Zacharioudakis (2017). **Метод быстрой аутентификации удаленных пользователей на основе концепции “нулевых знаний”**. Scientific Notes of the Ukrainian Research Institute of Communications, 45(1), pp. 109-116. [Source record](#)

*English: Method for high speed remote user authentication based on zero-knowledge conception*

В. Є. Мухін, Лефтеріос Захаріудакіс, О. Ю. Герасименко, М. С. Козерацький (2017). **Метод ідентифікації віддалених абонентів на основі концепції “нульових знань”**. Telecommunication and Information Technologies, issue 1. [Source record](#)

*English: Identification of remote users based on the zero-knowledge concept*

СГ Стіренко, ОП Марковський, Л Захаріудакіс, ЛД Міщенко (2017). **Спосіб прискореного обчислення модулярної експоненти**. Bulletin of NTUU KPI: Informatics, Control and Computer Engineering, issue 65. [Source record](#)

*English: A method for accelerated modular exponentiation*

ОП Марковський, Л Захаріудакіс, МФ Федотов (2016). **Метод строгої ідентифікації віддалених абонентів на основі стандартизованих шифроблоків та хеш-перетворень**. Bulletin of NTUU KPI: Informatics, Control and Computer Engineering, issue 64, pp. 161-165. [Source record](#)

*English: Strong remote-user identification using standardized cipher blocks and hash transformations*

## Conference papers

Eleftherios Zacharioudakis, Elena Kakoulli (2025). **A Scalable Cybersecurity Model for Shared SOC's in SMEs**. ICR 2025 · Lecture Notes in Networks and Systems, 1487, pp. 257-269. DOI: 10.1007/978-3-031-95652-2\_22

Vitaliy A. Romankevich, Kostiantyn V. Morozov, Oleksii V. Shuryha, Alexei M. Romankevich, Lefteris Zacharioudakis (2025). **Enhancement of the Formal Method of Determining Processor States of a Multiprocessor System Under Testing**. Lecture Notes on Data Engineering and Communications Technologies, pp. 142-155. DOI: 10.1007/978-3-031-84228-3\_12

Elena Kakoulli, Eleftherios Zacharioudakis, Salomi Evripidou (2025). **Intelligent Cyber Defense: Leveraging LLMs for Real-Time Threat Detection and Analysis**. EMCIS 2024 · Lecture Notes in Business Information Processing, 535, pp. 58-73. DOI: 10.1007/978-3-031-81322-1\_5

Elena Kakoulli, Salomi Evripidou, Eleftherios Zacharioudakis (2025). **Secure AI-Integrated Classroom Assistant for Intelligent Educational Support**. ICR 2025 · Lecture Notes in Networks and Systems, 1487, pp. 228-242. DOI: 10.1007/978-3-031-95652-2\_20

Eleftherios Zacharioudakis, Elena Kakoulli, Salomi Evripidou (2025). **XMeta-OS: A Conceptual Framework for Unified Resource Management in Distributed Edge-Cloud Environments**. ACR 2025 · Lecture Notes in Networks and Systems, 1346, pp. 460-475. DOI: 10.1007/978-3-031-87647-9\_38

Elena Kakoulli, Eleftherios Zacharioudakis (2024). **Exploration of the Role of Cryptoprocessors in Advancing IoT Security**. IEEE DCOSS-IoT 2024, pp. 524-531. DOI: 10.1109/dcoss-iot61029.2024.00083

Elena Kakoulli, Eleftherios Zacharioudakis (2024). **Survey on Cryptoprocessors Advances and Technological Trends**. ICR 2024 · Lecture Notes in Networks and Systems, 1058, pp. 411-430. DOI: [10.1007/978-3-031-65522-7\\_37](https://doi.org/10.1007/978-3-031-65522-7_37)

Alexei Romankevitch, Kostiantyn Morozov, Vitaliy Romankevich, Daniil Halytskyi, Zacharioudakis Eleftherios (2023). **Improved GL-Model of Behavior of Complex Multiprocessor Systems in Failure Flow**. Lecture Notes on Data Engineering and Communications Technologies, pp. 236-245. DOI: [10.1007/978-3-031-36118-0\\_21](https://doi.org/10.1007/978-3-031-36118-0_21)

S. Lavdas, L. Zacharioudakis, A. Khalifeh, Z. Zinonos (2021). **The Effect of Temperature and Humidity on Indoor LoRa Propagation Model**. IEEE DCSS 2021. DOI: [10.1109/dcoss52077.2021.00066](https://doi.org/10.1109/dcoss52077.2021.00066)

ОП Марковський, Л Захаріудакіс, МФ Федотов (2017). **Метод строгої ідентифікації абонентів в телекомунікаційних системах**. International Scientific and Technical Conference “Prospects of Telecommunications”. [Source record](#)

*English: Strong subscriber identification in telecommunications systems*

## Workshop papers

Zach Anthis, Lefteris Zacharioudakis (2024). **WOLFRAM in Action: Teaching and Learning (Pseudo)Random Generation with Cellular Automata in Higher Education Settings**. edu4AI 2024 · CEUR Workshop Proceedings, Vol. 3902. [Source record](#)

## Theses

Л Захаріудакіс (2018). **Методи і засоби підвищення ефективності ідентифікації користувачів розподілених систем**. Doctoral dissertation · Igor Sikorsky Kyiv Polytechnic Institute. [Source record](#)

*English: Methods and tools for increasing the efficiency of user identification in distributed systems*

E Zacharioudakis (2014). **Ασφάλεια στην ψηφιακή παιδεία, νομικό πλαίσιο και τρόποι αντιμετώπισης κινδύνων**. Master's thesis in Public Administration · Neapolis University Pafos. [Source record](#)

*English: Security in digital education: legal framework and approaches to risk mitigation*

## Technical community

Neapolis University Pafos reported a third-place finish in the Low Power / Non-assisted / 12h category of the 2023 RSGB IOTA amateur radio contest.

## Public records

Appointments: [ORCID](#). Education: [Neapolis institutional CV](#) and [2014 master's thesis](#). Teaching, supervision, service and bibliographic details: [source directory](#).