

Georgios Spathoulas

ASSOCIATE PROFESSOR - IIK, NTNU

E.D.I.P. - DEP. OF COMPUTER SCIENCE AND BIOMEDICAL INFORMATICS



Experience

Norwegian University of Science and Technology - NTNU

ADJUNCT ASSOCIATE PROFESSOR - DEPARTMENT OF INFORMATION SECURITY
AND COMMUNICATION TECHNOLOGY

- European Research Projects
- Courses teaching

Gjovik, Norway

2023 - today

Norwegian University of Science and Technology - NTNU

POST-DOCTORAL RESEARCH ASSOCIATE

- Participation in European Research Projects
- Preparation of proposals for European Research Projects
- Courses teaching

Gjovik, Norway

2017 - 2022

University of Thessaly

MEMBER OF THE LABORATORY TEACHING STAFF OF DEPARTMENT OF
COMPUTER SCIENCE AND BIOMEDICAL INFORMATICS

- Teaching undergraduate courses of the Department
- Teaching postgraduate courses of the Msc : Informatics and Computational Biomedicine
- Participation in research projects

Lamia, Greece

2014 - today

University of Thessaly

MEMBER OF THE TECHNICAL STAFF OF DEPARTMENT OF COMPUTER SCIENCE
AND BIOMEDICAL INFORMATICS

- Responsible for setting up and managing Department's computer systems and services
- Teaching lab courses of the Department

Lamia, Greece

2013 - 2014

Technical Education Institution of Central Greece

ADJUNCT LECTURER AT DEPARTMENT OF COMPUTER ENGINEERING

- Teaching undergraduate courses of the Department
- Teaching lab courses of the Department

Lamia, Greece

2007 - 2013

University of Central Greece

MEMBER OF THE TECHNICAL STAFF OF DEPARTMENT OF COMPUTER SCIENCE
AND BIOMEDICAL INFORMATICS

- Responsible for setting up and managing Department's computer systems and services
- Teaching lab courses of the Department of Computer Science and Biomedical Informatics

Lamia, Greece

2009 - 2013

University of Central Greece

COMPUTER SYSTEMS ADMINISTRATOR

- Responsible for setting up and managing University's computer systems and services

Lamia, Greece

2005 - 2009

Education

University of Piraeus

PHD - DEPARTMENT OF DIGITAL SYSTEMS

- Title : Improving the results of intrusion detection systems
- Supervisor : Pr. Sokratis Katsikas
- Evaluation : Excellent

Piraeus, Greece

2007-2013

University of Edinburgh

MSC IN COMPUTER SCIENCE

- Major specialization : Software engineering
- Minor specialization : Learning from data
- Mark : 67/100

Edinburgh, UK

2004-2005

Aristotle University of Thessaloniki

DIPLOMA OF ELECTRICAL AND COMPUTER ENGINEERING

- Specialization : Electronics and Computers
- Mark : 7.4

Thessaloniki, Greece

1996-2002

Research interests

Network security

Network intrusion detection, machine learning approaches, post-processing of intrusion detection alerts, SDN security, defensive deception techniques

Distributed ledgers technology (blockchain)

Efficient consensus mechanisms, layer 2 protocols, state channels, rollups, cross-chain bridges, proxy mechanisms for blockchain interaction, smart contracts security

IoT security

Detection of IoT related attacks, anomaly detection techniques for IoT systems, hardware security controls for IoT systems, IoT and blockchain integration

Trustworthy AI

Adversarial machine learning, attacks and mitigation techniques, verifiable machine learning, privacy preserving AI, distributed AI systems

Teaching experience

AFTER PHD

2021/22 – today **Introduction to computer security**

Msc Informatics and Computational Biomedicine - University of Thessaly
(3 academic periods)

2017/18 – today **Digital security and privacy**

Msc Informatics and Computational Biomedicine - University of Thessaly
(7 academic periods)

2014/15 – 2015/16 **Security and privacy of healthcare information systems**

Msc Informatics and Computational Biomedicine - University of Thessaly
(2 academic periods)

2016/17 – today **Cryptography**

Department of Computer Science and Biomedical Informatics - University of Thessaly
(8 academic periods)

- 2014/15 – today **Computer systems security**
Department of Computer Science and Biomedical Informatics - University of Thessaly
(10 academic periods)
- 2014/15 – 2016/17 **Software engineering**
Department of Computer Science and Biomedical Informatics - University of Thessaly
(3 academic periods)

BEFORE PHD

- 2009/10 **Computer Security**
Department of Computer Engineering - Technical Education Institution of Central Greece
(1 academic period)
- 2007/08 – 2008/09 **Cryptography**
Department of Computer Engineering - Technical Education Institution of Central Greece
(2 academic periods)
- 2007/08 – 2008/09 **Design of VPNs**
Department of Computer Engineering - Technical Education Institution of Central Greece
(2 academic periods)

Research projects

INTERNATIONAL RESEARCH PROJECTS

- 01/2024 – 12/2026 **COMFORTAGE - Norwegian University of Science and Technology - NTNU**
19.4M €- Horizon Europe - No 101137301
Prediction, Monitoring and Personalized Recommendations for Prevention and Relief of Dementia and Frailty
<https://www.comfortage.eu/>
- 01/2024 – 12/2026 **CYCLE - Norwegian University of Science and Technology - NTNU**
880K €- Erasmus 2027 - No 101128627
CYberseCurityLEarning: Master's degree in Cybersecurity
<https://www.comfortage.eu/>
- 01/2024 – 12/2026 **CYBERUNITY - Norwegian University of Science and Technology - NTNU**
3.5M €- Digital Europe - No 101128024
Community for Integrating and Opening Cyber Range Infrastructures that Build an Interoperable Cross-Domain and Cross-Sector Cyber Range Federation (Technical Coordinator of the project)
<https://www.cyberunity.eu/>
- 09/2023 – 08/2026 **ENFIELD - Norwegian University of Science and Technology - NTNU**
11.3M €- Horizon Europe - No 101120657
European Lighthouse to Manifest Trustworthy and Green AI (Technical Coordinator of the project)
<https://www.enfield-project.eu/>
- 05/2019 – 10/2022 **SDN-microSENSE - Norwegian University of Science and Technology - NTNU**
10.1M €- Horizon 2020 - No 833955
SDN - microgrid reSilient Electrical eNergy SystEm
<https://www.sdnmicrosense.eu/>
- 05/2019 – 07/2022 **LOCARD - Norwegian University of Science and Technology - NTNU**
6.83M €- Horizon 2020 - No 832735
Lawful evidence collecting and continuity platform development
<https://locard.eu/>

- 05/2018 – 10/2021 **DELTA - Norwegian University of Science and Technology - NTNU**
 3.87M €- Horizon 2020 - No 773960
 Future tamper-proof Demand rEsponse framework through seLf-configured, self-opTimized and collABorative virtual distributed energy nodes
<https://www.delta-h2020.eu/>
- 05/2017 – 04/2020 **GHOST - Norwegian University of Science and Technology - NTNU**
 4.9M €- Horizon 2020 - No 740923
 Safe-Guarding Home IoT Environments with Personalised Real-time Risk Control
<https://www.ghost-iot.eu/>

NATIONAL RESEARCH PROJECTS

- 05/2021 – today **SMART TOURIST - University of Thessaly**
 989K €- Reinforcement of the Research and Innovation Infrastructure -
 Intelligent research Infrastructures for Accessible and Legal human-centered Cultural-TOURIST Development in Central Greece)
<https://www.smart-tourist.gr/>
- 03/2021 – today **ParICT-CENG - University of Thessaly**
 1.200K €- Action Research-Create – Innovate co-funded by the European Union and national resources via the Operational Program "Competitiveness, Entrepreneurship & Innovation (EPAnEK)" -
 Improvement of ICT research infrastructures in Central Greece to process large volumes of data from sensor streams, multimedia and complex mathematical simulation models
- 09/2021 – today **ARTEMIS - University of Thessaly**
 996K €- Action Research-Create – Innovate co-funded by the European Union and national resources via the Operational Program "Competitiveness, Entrepreneurship & Innovation (EPAnEK)" - No T2EDK-02836
 Securing Supply Chain Traceability Using Distributed and Embedded Security Mechanisms (Principal Investigator)
<https://artemis.cs.unipi.gr/>
- 03/2020 – today **FOODCHAIN - University of Thessaly**
 698K €- Strengthening research, technological development and innovation plans in RIS3 sectors- No 5056119
 Monitoring supply chain and production workflow of food products through blockchain technology (Principal Investigator)
- 08/2018 – today **SMART DELIVERY - University of Thessaly**
 643K €- Action Research-Create – Innovate co-funded by the European Union and national resources via the Operational Program "Competitiveness, Entrepreneurship & Innovation (EPAnEK)" - No T1EΔK-02266
 Smart routing in urban environment for delivery services
<https://www.smart-delivery.gr/>

INDUSTRY PROJECTS

- 12/2022 – 11/2025 **SecQuantum - University of Thessaly**
 40K €- NOKIA Bell Labs global donation program
 Practical security in the quantum era

07/2021 – today **CYBEREMA - University of Thessaly**
12K € - Meazon A.E.
Design and development of a mechanism to connect smart meters to blockchain networks
(CYBEREMA T2EΔK-00127)

02/2018 – 05/2018 **SmartBioT - University of Thessaly**
30K €- NOKIA Bell Labs global donation program
Research on IoT Security based on Bio-informatics

NATIONAL DEVELOPMENT PROJECTS

1/2011 – 5/2013 **DASTA - University of Central Greece**
Education and Lifelong Learning ESPA
Employment & Career Centre (DASTA) of University of Central Greece

10/2010 – 9/2013 **MODIP - University of Central Greece**
Education and Lifelong Learning ESPA
Quality Assurance Unit (MODIP) of University of Central Greece

Thesis-Dissertations

2013 **Improving results of intrusion detection systems**
PhD Thesis
Department of Digital Systems, University of Piraeus
Supervisor : Prof. Katsikas Sokratis

2005 **Evaluating Current Java Technologies for Object to Relational Mapping**
Msc Dissertation
Msc in Computer science, University of Edinburgh
Supervisor : Prof. Stephen Gilmore

2002 **Optimal design of energy infrastructure of Egnatia Odos**
Dissertation
Department of Electrical and Computer Engineering, Aristotle University of Thessaloniki
Supervisor : Prof. Dokopoulos Petros

Thesis supervision

2023 **Clustering based anomaly detection for IoT devices**
Bachelor Thesis
Chatzianastasiou Theoharis – Department of Computer Science and Biomedical Informatics - UTH

2023 **Improving public blockchain systems though the use of state channels**
Bachelor Thesis
Negka Lydia Maria – Department of Computer Science and Biomedical Informatics - UTH

2022 **Security and privacy skills development through gamification for primary education students**
Msc Dissertation
Bokou Virginia – Msc Informatics and Computational Biomedicine - UTH

- 2022 **Optimal cybersecurity strategy selection for intelligent transportation systems**
Msc Dissertation
 Sakavelis Georgios – Msc Informatics and Computational Biomedicine - UTH
- 2022 **Development of a distributed registry office system based on blockchain technology**
Bachelor Thesis
 Papageorgiou Konstantinos – Department of Computer Science and Biomedical Informatics - UTH
- 2022 **Enabling blockchain interaction for IoT devices, through a secure proxy mechanism**
Bachelor Thesis
 Melissari Filisia – Department of Computer Science and Biomedical Informatics - UTH
- 2022 **Methodological malware analysis and applied reverse engineering on modern malware**
Bachelor Thesis
 Kalaitzidis Aggelos – Department of Computer Science and Biomedical Informatics - UTH
- 2021 **Genetic data encryption for genome wide association studies**
Bachelor Thesis
 Kyriakakis Nikolaos – Department of Computer Science and Biomedical Informatics - UTH
- 2020 **Privacy-Preserving Location Proximity information sharing**
Msc Dissertation
 Boubouris Taxiarchis – Msc Informatics and Computational Biomedicine - UTH
- 2020 **Implementation of homomorphic encryption algorithms in embedded systems**
Msc Dissertation
 Karageorgopoulou Angeliki – Msc Informatics and Computational Biomedicine - UTH
- 2020 **Development of a platform for controlling end users privacy in IoT environments**
Bachelor Thesis
 Kaframanis Grigorios – Department of Computer Science and Biomedical Informatics - UTH
- 2020 **Development of an introductory Cyber Security training program**
Bachelor Thesis
 Anastou Aristides – Department of Computer Science and Biomedical Informatics - UTH
- 2020 **Controlling IoT devices functionality upon users biometric features**
Bachelor Thesis
 Tsagiopoulou Sofia – Department of Computer Science and Biomedical Informatics - UTH
- 2020 **Decentralized biometric authentication system with the use of blockchain technology**
Msc Dissertation
 Toutara Foteini – Msc Informatics and Computational Biomedicine - UTH
- 2020 **Defensive deception techniques in SDN networks**
Msc Dissertation
 Belalis Ilias – Msc Informatics and Computational Biomedicine - UTH
- 2020 **Using blockchain technology for personal health data management**
Msc Dissertation
 Bounti Kalliopi – Msc Informatics and Computational Biomedicine - UTH
- 2019 **Remote authentication service through biometric data**
Bachelor Thesis
 Kiritsis Georgios – Department of Computer Science and Biomedical Informatics - UTH
- 2018 **ECG based biometric authentication**
Msc Dissertation
 Katsika Aggeliki – Msc Informatics and Computational Biomedicine - UTH

- 2018 **Privacy preserving genome wide association studies**
Msc Dissertation
 Sioulas Panagiotis Vlasios – Msc Informatics and Computational Biomedicine - UTH
- 2018 **Maintaining a shared intrusion detection alerts database among networks of different organisations**
Bachelor Thesis
 Damiris Georgios Paraskevas – Department of Computer Science and Biomedical Informatics - UTH
- 2018 **Privacy preserving clustering of intrusion detection alerts of different organisations' networks**
Bachelor Thesis
 Theodoridis Georgios – Department of Computer Science and Biomedical Informatics - UTH
- 2018 **Using machine learning techniques to authenticate users through ECG data**
Bachelor Thesis
 Chamatidis Ilias – Department of Computer Science and Biomedical Informatics - UTH
- 2018 **Predicting health status of users through secure multi party computation between wearable devices**
Bachelor Thesis
 Vasileiadou Emanouilia – Department of Computer Science and Biomedical Informatics - UTH
- 2018 **Monitoring supply chain through blockchain technology**
Bachelor Thesis
 Kelemati Ioanna – Department of Informatics and Telecommunications - UTH
- 2017 **Privacy preserving profitable mobile crowd sensing**
Msc Dissertation
 Loukidis Alexandros – Msc Informatics and Computational Biomedicine - UTH
- 2018 **Fibonacci series and cryptography applications**
Bachelor Thesis
 Pagiavlas Athanasios – Department of Computer Science and Biomedical Informatics - UTH
- 2015 **Decentralised social networks**
Bachelor Thesis
 Goutsias Konstantinos – Department of Computer Science and Biomedical Informatics - UTH

Publications

JOURNALS

- [18] I. Belalis, G. Spathoulas, and I. Anagnostopoulos, "Modeling intruder reconnaissance behavior through state diagrams to support defensive deception," *Journal of Cybersecurity and Privacy*, vol. 3, no. 2, pp. 275–302, 2023.
- [17] V. Tsoukas, E. Boumpa, V. Chioktour, M. Kalafati, G. Spathoulas, and A. Kakarountas, "Development of a dynamically adaptable routing system for data analytics insights in logistic services," *Analytics*, vol. 2, no. 2, pp. 328–345, 2023.
- [16] E. Boumpa, V. Tsoukas, V. Chioktour, M. Kalafati, G. Spathoulas, A. Kakarountas, P. Trivellas, P. Reklitis, and G. Malindretos, "A review of the vehicle routing problem and the current routing services in smart cities," *Analytics*, vol. 2, no. 1, pp. 1–16, 2022.
- [15] F. Casino, T. K. Dasaklis, G. P. Spathoulas, M. Anagnostopoulos, A. Ghosal, I. Bořoň, A. Solanas, M. Conti, and C. Patsakis, "Research trends, challenges, and emerging topics in digital forensics: A review of reviews," *IEEE Access*, vol. 10, pp. 25 464–25 493, 2022. DOI: 10.1109/ACCESS.2022.3154059.

- [14] G. Kavallieratos, C. Grigoriadis, A. Katsika, G. Spathoulas, P. Kotzanikolaou, and S. Katsikas, "Risk assessment and control selection for cyber-physical systems: A case study on supply chain tracking systems," *Journal of Surveillance, Security and Safety*, vol. 3, no. 4, pp. 128–149, 2022.
- [13] L. Negka, A. Katsika, G. Spathoulas, and V. Plagianakos, "Blockchain state channels with compact states through the use of rsa accumulators," *Blockchain: Research and Applications*, p. 100 114, 2022, ISSN: 2096-7209. doi: <https://doi.org/10.1016/j.bcra.2022.100114>. [Online]. Available: <https://www.sciencedirect.com/science/article/pii/S2096720922000550>.
- [12] G. Spathoulas, "Scaling up public blockchains," *IEEE Potentials*, vol. 41, no. 6, pp. 26–31, 2022. doi: 10.1109/MPOT.2022.3198928.
- [11] V. Tsoukas, A. Gkogkidis, A. Kampa, G. Spathoulas, and A. Kakarountas, "Enhancing food supply chain security through the use of blockchain and tinyml," *Information*, vol. 13, no. 5, p. 213, 2022.
- [10] G. Kavallieratos, G. Spathoulas, and S. Katsikas, "Cyber risk propagation and optimal selection of cybersecurity controls for complex cyberphysical systems," *Sensors*, vol. 21, no. 5, p. 1691, 2021.
- [9] L. Negka and G. Spathoulas, "Towards secure, decentralised, and privacy friendly forensic analysis of vehicular data," *Sensors*, vol. 21, no. 21, 2021, ISSN: 1424-8220. doi: 10.3390/s21216981. [Online]. Available: <https://www.mdpi.com/1424-8220/21/21/6981>.
- [8] L. D. Negka and G. P. Spathoulas, "Blockchain state channels: A state of the art," *IEEE Access*, vol. 9, pp. 160 277–160 298, 2021. doi: 10.1109/ACCESS.2021.3131419.
- [7] M. Anagnostopoulos, G. Spathoulas, B. Viaño, and J. Augusto-Gonzalez, "Tracing your smart-home devices conversations: A real world iot traffic data-set," *Sensors*, vol. 20, no. 22, p. 6600, 2020.
- [6] D. Myridakis, G. Spathoulas, A. Kakarountas, and D. Schinianakis, "Smart devices security enhancement via power supply monitoring," *Future Internet*, vol. 12, no. 3, p. 48, 2020.
- [5] G. Spathoulas, G. Theodoridis, and G.-P. Damiris, "Using homomorphic encryption for privacy preserving clustering of intrusion detection alerts," *International Journal of Information Security, Springer (paper accepted)*, 2020.
- [4] G. Spathoulas, N. Giachoudis, G.-P. Damiris, and G. Theodoridis, "Collaborative blockchain-based detection of distributed denial of service attacks based on internet of things botnets," *Future Internet*, vol. 11, no. 11, p. 226, 2019.
- [3] G. Spathoulas and S. Katsikas, "Enhancing ids performance through comprehensive alert post-processing," *Computers & security*, vol. 37, pp. 176–196, 2013.
- [2] —, "Methods for post-processing of alerts in intrusion detection: A survey," *International Journal of Information Security Science*, vol. 2, no. 2, pp. 64–80, 2013.
- [1] G. Spathoulas and S. Katsikas, "Reducing false positives in intrusion detection systems," *Computers & security*, vol. 29, no. 1, pp. 35–44, 2010.

BOOK CHAPTERS

- [4] G. Spathoulas and S. Katsikas, "Implications of blockchain technology in industry 4.0," in *Handbook of Research on Artificial Intelligence, Innovation and Entrepreneurship*, Edward Elgar Publishing, 2023, pp. 218–236.
- [3] G. Spathoulas, L. Negka, P. Pandey, and S. Katsikas, "Can blockchain technology enhance security and privacy in the internet of things?," in *Advances in Core Computer Science-Based Technologies: Papers in Honor of Professor Nikolaos Alexandris*, G. A. Tsihrintzis and M. Virvou, Eds. Cham: Springer International Publishing, 2021, pp. 199–228, ISBN: 978-3-030-41196-1.
- [2] M. Dimitrios, S. Georgios, K. Athanasios, D. Schoinianakis, and J. Lueken, "Mimicking biometrics on smart devices and its application in iot security for health systems," in *IoT and ICT for Healthcare Applications*, N. Gupta and S. Paiva, Eds. Cham: Springer International Publishing, 2020, pp. 175–189, ISBN: 978-3-030-42934-8. doi: 10.1007/978-3-030-42934-8_10.

- [1] G. Spathoulas and S. Katsikas, “Towards a secure industrial internet of things,” in *Security and Privacy Trends in the Industrial Internet of Things*, Springer, Cham, 2019, pp. 29–45.

PREPRINTS

- [1] L. Negka, A. Katsika, G. Spathoulas, and V. Plagianakos, *Origami: A flexible state channels design for public blockchain systems*, 2023. arXiv: 2304.10313 [cs.CR].

CONFERENCES

- [38] G. K. Georgios Spathoulas Angeliki Katsika, “Privacy preserving and verifiable outsourcing of ai processing for cyber-physical systems,” in *International Conference on Information and Communications Security*, Springer (to be published), 2024.
- [37] G. Spathoulas, M. Anagnostopoulos, K. Papageorgiou, G. Kavallieratos, and G. Theodoridis, “Improving dns data exfiltration detection through temporal analysis,” in *Ubiquitous Security*, G. Wang, H. Wang, G. Min, N. Georgalas, and W. Meng, Eds., Singapore: Springer Nature Singapore, 2024, pp. 133–146, ISBN: 978-981-97-1274-8.
- [36] I. Belalis., G. Spathoulas., and I. Anagnostopoulos., “Evading detection during network reconnaissance,” in *Proceedings of the 9th International Conference on Information Systems Security and Privacy - ICISSP, INSTICC, SciTePress*, 2023, pp. 528–534, ISBN: 978-989-758-624-8. DOI: 10.5220/0011685900003405.
- [35] A. Karageorgopoulou, V. Tsoukas, G. Spathoulas, A. Kakarountas, and M. Koziri, “Porting the paillier algorithm for homomorphic encryption on portable devices,” in *2023 IEEE International Conference on Consumer Electronics (ICCE)*, IEEE, 2023.
- [34] A. Katsika, K. Papageorgiou, A. Fakis, V. Plagianakos, and G. Spathoulas, “An efficient and lightweight commitment scheme for iot data streams,” in *2023 19th International Conference on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT)*, IEEE, 2023, pp. 461–468.
- [33] A. Katsika, K. Papageorgiou, A. Fakis, A. Kakarountas, F. Andritsopoulos, V. Plagianakos, and G. Spathoulas, “Compressing time series towards lightweight integrity commitments,” in *2023 8th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM)*, 2023, pp. 1–7. DOI: 10.1109/SEEDA-CECNSM61561.2023.10470798.
- [32] E. Boumpa, V. Tsoukas, V. Chioktour, M. Kalafati, G. Spathoulas, and A. Kakarountas, “Smart delivery for goods exploiting ml algorithms,” in *Proceedings of the 26th Pan-Hellenic Conference on Informatics*, 2022, pp. 304–308.
- [31] E. Boumpa, V. Tsoukas, A. Gkogkidis, G. Spathoulas, and A. Kakarountas, “Security and privacy concerns for healthcare wearable devices and emerging alternative approaches,” in *Wireless Mobile Communication and Healthcare*, X. Gao, A. Jamalipour, and L. Guo, Eds., Cham: Springer International Publishing, 2022, pp. 19–38.
- [30] S. Lalou, G. Spathoulas, and S. Katsikas, “Efficient consensus between multiple controllers in software defined networks (sdn),” in *Proceedings, SECURWARE 2022, The Sixteenth International Conference on Emerging Security Information, Systems and Technologies*, International Academy, Research and Industry Association (IARIA), 2022.
- [29] K. Papageorgiou and G. Spathoulas, “Self-sovereign, verifiable, ubiquitous and privacy preserving public entity documents through the use of blockchain technology,” in *2022 7th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM)*, 2022, pp. 1–8. DOI: 10.1109/SEEDA-CECNSM57760.2022.9932938.
- [28] G. Spathoulas, G. Kavallieratos, S. Katsikas, and A. Baiocco, “Attack path analysis and cost-efficient selection of cybersecurity controls for complex cyberphysical systems,” in *Computer Security. ESORICS 2021 International Workshops*, Cham: Springer International Publishing, 2022, pp. 74–90, ISBN: 978-3-030-95484-0.
- [27] S. Tsiagiopoulou, G. Spathoulas, and A. Kakarountas, “Secure aggregation of users’ privacy preferences in shared iot environments,” in *2021 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM)*, 2021, pp. 1–8. DOI: 10.1109/SEEDA-CECNSM53056.2021.9566248.

- [26] V. Tsoukas, A. Gkogkidis, A. Kampa, G. Spathoulas, and A. Kakarountas, "Blockchain technology in food supply chain: A state of the art," in *2021 6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM)*, 2021, pp. 1–8. DOI: 10.1109/SEEDA-CECNSM53056.2021.9566256.
- [25] I. Belalis, G. Kavallieratos, V. Gkioulos, and G. Spathoulas, "Enabling defensive deception by leveraging software defined networks," in *INTERNET 2020 The Twelfth International Conference on Evolving Internet*, International Academy, Research and Industry Association (IARIA), 2020.
- [24] K. Giannoutakis, G. Spathoulas, C. Filelis-Papadopoulos, A. Collen, M. Anagnostopoulos, K. Votis, and N. Nijdam, "A blockchain solution for enhancing cybersecurity defence of iot," in *2020 IEEE International Conference on Blockchain (Blockchain)*, IEEE, 2020, pp. 490–495.
- [23] A. Kakarountas, G. Spathoulas, P. Trivellas, P. Reklitis, and G. Malindretos, "Survey on routing services for smart delivery in urban environments," in *2020 5th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM)*, IEEE, 2020, pp. 1–5.
- [22] F. Toutara and G. Spathoulas, "A distributed biometric authentication scheme based on blockchain," in *2020 IEEE International Conference on Blockchain (Blockchain)*, IEEE, 2020, pp. 470–475.
- [21] J. Augusto-Gonzalez, A. Collen, S. Evangelatos, M. Anagnostopoulos, G. Spathoulas, K. Giannoutakis, K. Votis, D. Tzovaras, B. Genge, E. Gelenbe, et al., "From internet of threats to internet of things: A cyber security architecture for smart homes," in *2019 IEEE 24th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)*, IEEE, 2019, pp. 1–6.
- [20] I. Chamtidis and G. Spathoulas, "Machine learning for all: A more robust federated learning framework," in *Proceedings of the 5th International Conference on Information Systems Security and Privacy - Volume 1: ICISSP, INSTICC, SciTePress*, 2019, pp. 544–551, ISBN: 978-989-758-359-9. DOI: 10.5220/0007571705440551.
- [19] N. Giachoudis, G.-P. Damiris, G. Theodoridis, and G. Spathoulas, "Collaborative agent-based detection of ddos iot botnets," in *2019 15th International Conference on Distributed Computing in Sensor Systems (DCOSS)*, IEEE, 2019, pp. 205–211.
- [18] D. Myridakis, G. Spathoulas, A. Kakarountas, D. Schinianakis, and J. Lueken, "Monitoring supply current thresholds for smart device's security enhancement," in *2019 15th International Conference on Distributed Computing in Sensor Systems (DCOSS)*, IEEE, 2019, pp. 224–227.
- [17] L. Negka, G. Gketsios, N. A. Anagnostopoulos, G. Spathoulas, A. Kakarountas, and S. Katzenbeisser, "Employing blockchain and physical unclonable functions for counterfeit iot devices detection," in *Proceedings of the International Conference on Omni-Layer Intelligent Systems*, 2019, pp. 172–178.
- [16] G. Spathoulas, S. Evangelatos, M. Anagnostopoulos, G. Mema, and S. Katsikas, "Detection of abnormal behavior in smart-home environments," in *2019 4th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDA-CECNSM)*, IEEE, 2019, pp. 1–6.
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Awards

2024 ICICS 2024 Best Paper Award

Mytilene, Greece

The 2024 International Conference on Information and Communications Security (ICICS 2024)

2018 2018 ICCE Berlin Outstanding Paper Award

Berlin, Germany

The 2018 IEEE International Conference on Consumer Electronics-Berlin

Editing

PROGRAM COMMITTEE MEMBER

2024 ARES 2024

The International Conference on Availability, Reliability and Security

2024 SecRIot 2024

The 5th International Workshop on Security and Reliability of IoT Systems

2024 ICICS 2024

The 26th International Conference on Information and Communications Security

2024 CyberICPS2024

The 10th Workshop On The Security Of Industrial Control Systems & Of Cyber-Physical Systems

- 2023 **SEEDA CECNSM 2023**
8th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference
- 2023 **CyberICPS2023**
The 9th Workshop On The Security Of Industrial Control Systems & Of Cyber-Physical Systems
- 2023 **ICICS 2023**
The 25th International Conference on Information and Communications Security
- 2022 **SPIoT 2022**
The 11th International Symposium on Security and Privacy on Internet of Things
- 2022 **MSN2022**
The 18th International Conference on Mobility, Sensing and Networking (MSN 2022)
- 2022 **CyberICPS2022**
The 8th Workshop on the Security of Industrial Control Systems & of Cyber-Physical Systems (CyberICPS 2022)
- 2021 **CyberICPS2021**
7th Workshop on the Security of Industrial Control Systems & of Cyber-Physical Systems (CyberICPS 2021)
- 2021 **SMAP2021**
16th International Workshop on Semantic and Social Media Adaptation & Personalization
- 2021 **SEEDA CECNSM 2021**
6th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference
- 2021 **SPIoT 2021**
The 10th International Symposium on Security and Privacy on Internet of Things
- 2020 **CyberICPS2020**
6th Workshop on the Security of Industrial Control Systems & of Cyber-Physical Systems (CyberICPS 2020)
- 2020 **SMAP2020**
15th International Workshop on Semantic and Social Media Adaptation & Personalization
- 2020 **SEEDA CECNSM 2020**
5th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference
- 2020 **SPIoT 2020**
The 9th International Symposium on Security and Privacy on Internet of Things
- 2019 **CyberICPS2019**
5th Workshop on the Security of Industrial Control Systems & of Cyber-Physical Systems (CyberICPS 2019)
- 2019 **SEEDA CECNSM 2019**
4th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference
- 2019 **SPIoT 2019**
The 8th International Symposium on Security and Privacy on Internet of Things
- 2018 **CyberICPS2018**
4th Workshop on the Security of Industrial Control Systems & of Cyber-Physical Systems (CyberICPS 2018)

- 2018 **STM2018**
14th International Workshop on Security and Trust Management
- 2017 **SMAP2017**
12th International Workshop on Semantic and Social Media Adaptation & Personalization
- 2016 **SMAP2016**
11th International Workshop on Semantic and Social Media Adaptation & Personalization
- 2014 **SMAP2014**
The 11th International Conference on Trust, Privacy and Security in Digital Business

JOURNAL REVIEWER

BCRA **Elsevier Blockchain Research and Applications**

ACCESS **IEEE Access**

COMCO **Elsevier Computer Communications Journal**

COSE **Elsevier Computers and Security Journal**

IJIS **International Journal of Information Security**

SENSC9 **MDPI Sensors Journal**

ELEC **MDPI Electronics Journal**

POT **IEEE Potentials**

CONFERENCE REVIEWER

- 2022 **ICWE 2022**
22nd International Conference on Web Engineering (ICWE 2022)
- 2016 **BDCAT 2016**
The 3rd IEEE/ACM International Conference on Big Data Computing, Applications and Technologies
- 2015 **ESORICS 2015**
24th IFIP International Information Security Conference
- 2013 **SEC@SAC 2013**
Computer Security track of the 28th ACM Symposium on Applied Computing
- 2013 **DBSEC 2013**
27th Annual IFIP WG 11.3 Working Conference on Data and Applications Security and Privacy
- 2012 **SEC@SAC 2012**
Computer Security track of the 27th ACM Symposium on Applied Computing
- 2011 **NSS 2011**
The 5th International Conference on Network and System Security
- 2011 **ISC 2011**
14th International Conference on Information Security

- 2011 **SECRYPT 2011**
International Conference on Security and Cryptography
- 2010 **WISTP 2010**
Workshop in Information Security theory and Practice
- 2009 **IFIP/SEC 2009**
24th IFIP International Information Security Conference

Administrative duties

- 11/2023 – today **Deputy UTH Project Leader for the project : Climate Change and Natural Disasters Awareness Raising using Virtual Worlds**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 12/2022 – today **Deputy UTH Project Leader for the project : Practical security in the quantum era**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 09/2021 – 11/2023 **UTH Project Leader for the project : Securing Supply Chain Traceability Using Distributed and Embedded Security Mechanisms [T2EDK-02836]**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 3/2020 – 12/2023 **UTH Project Leader for the project : Foodchain - Monitoring of supply chain and production of food products through blockchain**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 1/2019 – 05/2022 **Deputy UTH Project Leader for the project : SmartDelivery - Smart routing in urban environment for delivery services**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 1/2019 – 12/2021 **Deputy UTH Project Leader for the project : SmartBioT - Research on IoT Security based on Bio-informatics**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 9/2015 – today **Member of Web Promotion Committee of the Department**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 9/2015 – today **Member of the Committee for network, systems and infrastructure of the Department**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 9/2016 – 8/2023 **Representative of Laboratory Teaching staff**
Department of Computer Science and Biomedical Informatics - University of Thessaly
- 9/2018 **Member of the Election Committee for the Representative of Laboratory Teaching Staff in the Faculty**
School of Science - University of Thessaly

12/2017 **Chairman of the Bid Evaluation Committee for the project entitled:
Department of Computer Science and Biomedical Informatics**
Department of Computer Science and Biomedical Informatics - University of Thessaly

10/2014 – 10 2015 **Member of the three-member committee of experts for the technical
evaluation of competitions of the University of Thessaly**
Department of Computer Science and Biomedical Informatics - University of Thessaly

4/2014 **Member of the three-member Committee for the Evaluation of Candidates
for the Research Project Integration of data from multiple sources: a fusion
of epidemiology and bio-informatics with applications to complex diseases**
Department of Computer Science and Biomedical Informatics - University of Thessaly

Talks

05/03/2023 **Trustworthy AI**
Invited talk at Workshop between NTNU and Norwegian national tax authority (Gjovik, Norway)

01/11/2023 **AI-based production processes in the sustainable factory of tomorrow**
Invited talk MADE conference day (Odense, Denmark)

25/03/2022 **Scaling up public blockchain systems: the road ahead**
Invited lecture at Department of Electronic Systems, Aalborg University (Copenhagen)

21/11/2021 **Scaling up public blockchain systems: the road ahead**
Invited talk at 6th IEEE Hellenic Students and Young Professionals Congress

13/12/2017 **Blockchain : Balancing between innovation and overhype**
bug@luth 1st meetup, supported by A2rTEST and IEEE Student Branch UTH (Lamia)

18/07/2017 **Why is cybersecurity such a hard problem to solve?**
695 AVP - MERIP

21/03/2017 **Why is cybersecurity such a hard problem to solve?**
8th IEEE UTH (Lamia) student scientific workshop

22/11/2016 **Security and privacy in IoT age**
7th IEEE UTH (Lamia) student scientific workshop

Skills

Development solidity, go, python, java, c#, django, php-mysql, html-css, drupal, vcs

System administration linux, mail, web hosting, dns, ldap, virtualization, containers, docker, automation, cloud, cisco, ethereum, hyperledger fabric

Training

28/02/2020 **Developing on Hyperledger Fabric 1.4**
Blockchain Training Alliance

Languages

English First Certificate in English, University of Cambridge

Reference contacts

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