



Iacovos Ioannou, Ph.D.

Assistant Professor, Neapolis University Pafos · IEEE Senior Member

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SHORT BIO

Dr. Iacovos Ioannou is an Assistant Professor at Neapolis University Pafos, Cyprus, and a Senior Researcher at the CYENS Centre of Excellence (Smart Networked Systems MRG). He holds a Ph.D. in Computer Science from the University of Cyprus (2021), with research focused on **Distributed Artificial Intelligence, Machine Learning, and 5G/6G wireless systems**. He is an **IEEE Senior Member** and Associate Editor for *IEEE Networking Letters*. He has authored a research book on Distributed AI for 5G/6G communications (CRC Press / Taylor & Francis, 2024) and over **131 peer-reviewed publications** with **900+ Google Scholar citations and an h-index of 15**. Alongside his academic career, he brings over two decades of IT industry experience.

I. RESEARCH INTERESTS

- **5G/6G Networks:** Distributed AI-driven frameworks for next-generation communication; cell-free architectures and UE-VBS frameworks.
- **Wireless Communications:** Interference management, resource allocation, massive MIMO systems, RIS-aided localization and beam management.
- **Distributed AI & Machine Learning:** Enhancing D2D communications with ML models for clustering, optimization, and network control; deep reinforcement learning, federated learning, GNNs, XAI.
- **Internet of Things (IoT):** Security mechanisms, intrusion detection (FLIDS, GEMLIDS), federated learning, jamming detection and recovery, protocol optimization.
- **Localization & Jamming Attack Mitigation:** Securing wireless network operations with precise indoor positioning and resilient anti-jamming mechanisms.
- **Smart Grid & Mini-Grid Management:** Deep reinforcement learning for SoC balancing, power forecasting, and renewable energy integration.
- **Edge/Fog Computing:** Adaptive frameworks for real-time data processing in IoT environments.

II. EDUCATION

Ph.D., Computer Science, University of Cyprus (2017 – 2021)

Dissertation: A novel Distributed Artificial Intelligence (DAI) framework with Machine Learning for 5G/6G communication.

M.Sc., Computer Science, Open University of Cyprus (2012 – 2016)

Specialisation: Information Security · Grade: 9.4 / 10

B.Sc., Computer Science, University of Cyprus (2001 – 2005)

Grade: 8.1 / 10, 3rd in class · Final Project: Geographic Information Systems for transportation (ARCIMS, ARCINFO, ARCGIS).

III. PROFESSIONAL EXPERIENCE

Assistant Professor, Neapolis University Pafos, Cyprus (2026 – Present)

- Appointed to the Department of Computer Science, School of Economics, Business and Computer Science.
- Duties comprise undergraduate teaching, development of new academic programmes, design of competitive externally funded programmes, and continued publication in Scopus-indexed Q1/Q2 venues.

Assistant Professor, Philips University, Cyprus (2026 – August 2026)

- Teaching and developing BSc-level Computer Science courses including HCI (CST-234), Systems Analysis and Design (CST-233), Data Visualisation (CST-127), and Computers and Applications I (CST-110/Computer Applications).
- Leading curriculum development: syllabi design, weekly content creation, assessment frameworks, and course accreditation materials.

Researcher, CYENS Centre of Excellence, Cyprus (2018 – Present)

- Smart Networked Systems (SNS) MRG. Researching smart-city applications in IoT, 5G/6G, Distributed AI, and Metaverse technologies.
- Contributing to EU Horizon projects: ADROIT6G, METACITIES.

Researcher, GÉANT, Europe (2018 – Present)

- Leading research on next-generation networking, orchestration, automation and virtualisation (OAV).
- Co-authored white papers and deliverables on OAV architectures and maturity models.

Assistant Professor, European University Cyprus (2025 – 2026)

- Taught Information Security (CSE-405) and related Computer Science courses including Introduction to Programming and Object Orientation (CSC-600).
- Developed examination materials, question banks, and course content; completed the Advance HE “New to Teaching Programme” (November 2025).

Special Teaching Scientist / Visiting Lecturer, Various Institutions (2017 – 2025)

- University of Cyprus, UCLan Cyprus, European University Cyprus, American University of Cyprus, Cyprus University of Technology (TEPAK), Ledra College.
- Teaching courses on Java Programming, Web Programming, Databases, IoT, Wireless & Mobile Networks, and Information Security. (See Section VIII for full course catalogue.)

Software Developer, PrimeTel (2013 – 2018)

- Developed and maintained web and mobile network applications.
- Technologies: SharePoint, Java, HTML5, PHP, SQL, and backend services.

IT & Programmer, Cyprus Stock Exchange (2008 – 2013)

- System administration, software development, and database management.

GIS Programmer, Department of Lands and Surveys, Cyprus (2007 – 2008)

- Developed Geographic Information Systems applications using ArcGIS, ArcInfo, and ArcIMS.

IT Programmer, Phileleftheros Newspaper (2001 – 2007)

- Software development and IT support across newsroom and publishing systems.

IV. PROFESSIONAL SERVICE

Workshop Organisation

- **Workshop Chair & Organiser:** XAIoT 2026 — Workshop on Explainable AI for IoT (Larnaca, Cyprus).
- **Workshop Chair & Organiser:** ISIoT 2026 — Workshop on IoT Security and Intelligence (Reykjavik, Iceland, June 2026).

Conference Organisation & TPC Roles

- **TPC Chair:** ASIANComNet 2024, ASIANComNet 2025, DCOSS 2026 ISIoT Workshop.
- **TPC Member:** IEEE Globecom, IEEE ICC, IEEE WCNC, IFIP Networking 2025, MedComNet, CIoT, AIoT, ICCE-Taiwan.

Editorial Service

- **Associate Editor:** IEEE Networking Letters.
- **Associate Editor:** International Journal of Antennas and Propagation (Wiley / Hindawi).
- **Reviewer:** IEEE Access, IEEE IoT Journal, Computer Networks (Elsevier), Computer Communications (Elsevier), Sensors (MDPI), IET Communications, and 20+ other journals. Over 300 papers reviewed.

Invited Talks & Keynotes

- **Keynote Speaker:** ICRISSET 2022, CEII 2022, ICRISSET 2023, WiSPNET 2024, ASIANComNet 2024, ASIANComNet 2025, ICCSS 2025.
- **Invited Speaker:** MNIT Jaipur, DTU Delhi, NIT Goa (India).

V. HONORS, AWARDS & FELLOWSHIPS

- **IEEE Senior Member** Recognition.

VI. RESEARCH PROJECTS

- **ADROIT6G** — EU Horizon: Distributed AI-driven open and programmable architecture for 6G networks.
- **METACITIES** — EU Horizon: Exploiting digital twins and metaverse technologies in south-eastern Europe.
- **GÉANT GN5-2 (OAV / NMaaS)** — Research and integration of orchestration, automation and virtualisation in Europe's research networks.
- **Cybersafe Cyprus** — Development of a national cybersecurity framework.
- **National CSIRT — CTIP System** — Cyber threat intelligence and response framework.

VII. PUBLICATIONS & BOOKS

Publication Summary: 131 peer-reviewed publications · 900+ citations · h-index 15.

- **Journal Articles:** 35 (24 in Scimago Q1 journals).
- **Conference Papers:** 51 peer-reviewed.
- **Book:** 1 (CRC Press / Taylor & Francis).
- **Book Chapters:** 2 (forthcoming).
- **White Papers & Technical Reports:** 7 (GÉANT, ADROIT6G).
- **Ph.D. Thesis:** 1.

Authored Book

I. Ioannou, P. Nagaradjane, V. Vassiliou, A. Pitsillides, C. Christophorou, *Distributed Artificial Intelligence for 5G/6G Communications: Frameworks with Machine Learning*, CRC Press (Taylor & Francis), 2024. ISBN: 978-1-032-46553-3.

Selected Recent Journal Publications

- G.S.P. Ghantasala, **I. Ioannou**, T. Kolla, P. Vidyullatha, N. Vijayalakshmi, et al., "A Multi-Layered Framework for Adaptive and Optimized Real-Time Data Processing in Edge-Fog IoT Environments," *IEEE Internet of Things Journal*, 2026.
- S. Ghosh, **I.I. Ioannou**, S.P. Maity, P. Nagaradjane, V. Vassiliou, "Relay Performance in D2D Communications Overlaying Multi-Antenna Cellular Networks," *IEEE Open Journal of the Communications Society*, 2026.

- **I. Ioannou**, V. Vassiliou, M. Raspopoulos, "Adaptive Multi-Stage Hybrid Localization for RIS-Aided 6G Indoor Positioning Systems: Combining Fingerprinting and Geometric Methods with Condition-Aware Fusion," *Sensors*, 2026.
- **I. Ioannou**, V. Vassiliou, "Generative Adversarial Networks for Energy-Aware IoT Intrusion Detection: Comprehensive Benchmark Analysis of GAN Architectures with Accuracy-per-Joule Evaluation," *Sensors*, vol. 26, no. 3, p. 757, 2026.
- **I. Ioannou**, S.V.J. Rani, P. Nagaradjane, C. Christophorou, V. Vassiliou, et al., "Enhancing 5G and 6G networks through a dynamic dual-stage machine learning heuristic framework for selecting UEs as UE-VBSs," *Ad Hoc Networks*, vol. 177, p. 103908, 2025.
- V. Sittakul, **I. Ioannou**, P. Nagaradjane, V. Vassiliou, "Intelligent congestion control in 5G URLLC Software-Defined Networks using adaptive resource management via Reinforced Dueling Deep Q-Networks," *Journal of Network and Computer Applications*, p. 104276, 2025.
- **I. Ioannou**, P. Nagaradjane, P. Angin, P. Balasubramanian, K.J. Kavitha, et al., "GEMLIDS-MIOT: A green effective machine learning intrusion detection system based on federated learning for medical IoT network security hardening," *Computer Communications*, vol. 218, pp. 209–239, 2024.
- R.B. Shaik, P. Nagaradjane, **I. Ioannou**, V. Sittakul, V. Vassiliou, A. Pitsillides, "AI/ML-aided capacity maximization strategies for URLLC in 5G/6G wireless systems: A survey," *Computer Networks*, vol. 249, p. 110506, 2024.
- **I.I. Ioannou**, M. Raspopoulos, P. Nagaradjane, C. Christophorou, W.A. Aziz, V. Vassiliou, A. Pitsillides, "DeepRISBeam: deep learning-based RIS beam management for radio channel optimization," *IEEE Access*, vol. 12, pp. 81646–81681, 2024.
- **I. Ioannou**, V. Vassiliou, C. Christophorou, A. Pitsillides, "Distributed artificial intelligence solution for D2D communication in 5G networks," *IEEE Systems Journal*, vol. 14, no. 3, pp. 4232–4241, 2020.

Selected Recent Conference Publications

- **I. Ioannou**, A. Gregoriades, C. Christophorou, M. Raspopoulos, V. Vassiliou, "Implementing a cell-free 6G distributed AI network with the use of deep ML under a traditional multi-cell mobile network," *2025 5th IEEE Middle East and North Africa Communications Conference (MENACOMM)*, 2025.
- **I. Ioannou**, P. Nagaradjane, M. Raspopoulos, V. Papadopoulou-Lesta, et al., "Topology-Aware Deep Reinforcement Learning for RIS Beamforming: A GNN-PPO and Risk-Sensitive Evaluation," *2025 Asian Conference on Communication and Networks (ASIANComNet)*, 2025.
- **I. Ioannou**, C. Christophorou, V. Vassiliou, L. Christofi, J.S. Vardakas, et al., "ADROIT6G a fully distributed and dynamic AI-powered architecture for the 6G networks," *Proc. EuCNC & 6G Summit*, 2024.
- T. Ahmad, X.J. Li, M. Ashfaq, M. Savva, **I. Ioannou**, V. Vassiliou, "Location-enabled IoT (LE-IoT): Indoor localization for IoT environments using machine learning," *2024 20th International Conference on Distributed Computing in Smart Systems and the Internet of Things (DCOSS-IoT)*, pp. 392–399, 2024.
- C. Christophorou, **I. Ioannou**, V. Vassiliou, L. Christofi, J.S. Vardakas, et al., "ADROIT6G DAI-driven open and programmable architecture for 6G networks," *2023 IEEE Globecom Workshops (GC Wkshps)*, pp. 744–750, Kuala Lumpur, Malaysia, 2023.
- M. Savva, **I. Ioannou**, V. Vassiliou, "Fuzzy-logic based IDS for detecting jamming attacks in wireless mesh IoT networks," *2022 20th Mediterranean Communication and Computer Networking Conference (MedComNet)*, pp. 54–63, 2022.

A complete list of 131 publications (35 journal articles, 51 conference papers, 1 book, 2 book chapters, 7 white papers, 1 thesis) is provided in the separate Publication List document.

VIII. COURSES TAUGHT

Code	Course Title	Institution	Period
CST-234	Human-Computer Interaction	Philips University	2026
CST-233	Systems Analysis and Design	Philips University	2026
CST-127	Data Visualisation	Philips University	2026
CST-110	Computers and Applications I	Philips University	2026

Code	Course Title	Institution	Period
CSE-405	Information Security (Face-to-Face)	European University Cyprus	Fall 2025
CSC-600	Introduction to Programming and Object Orientation	European University Cyprus	2024 – 2025
CSE-100	Programming Principles I — Robotics Lab	European University Cyprus	2025 – 2026
CSE-213 / CSC-209	Web Programming	European University Cyprus	2025 – 2026
CSC-101	Introduction to Programming	Ledra College	2018 – 2022
CO3514	Wireless & Mobile Networks	UCLan Cyprus	2021 – 2025
CSC-303	Databases I	American University of Cyprus	Fall 2024
MSE-471	Databases II	American University of Cyprus	Spring 2024
CSC-408	Advanced Web Programming	American University of Cyprus	Spring 2024
XDM-103	Internet of Things (IoT)	Cyprus University of Technology (TEPAK)	2023 – 2024
EPL-002	Introduction to the Science of Information	University of Cyprus	2021 – 2025
CSC 650	Internet of Things	University of Cyprus	Spring 2025

Student Supervision

- **BSc Final Year Projects (UCY):** Blockchain for IoT Security (2023), IoT Device Management with Blockchain (2023), SDN Smart Home Network (2020), NB-IoT Smart Cities with Arduino (2019), Blockchain in IoT Devices (2019).
- **MSc Thesis Supervision (UCY):** CoAP IoT Attack Identification using Machine Learning — Andreas Charalambous (2021).
- **Advance HE Teaching Programme:** Completed the “New to Teaching Programme” at European University Cyprus (November 2025).

IX. TECHNICAL SKILLS

- **Programming:** Python, Java, C/C++, PHP, SQL, MATLAB, JavaScript, HTML5/CSS.
- **Web & Frameworks:** Laravel, Spring, Blade, React, Vue.js, jQuery, Ajax, SharePoint.
- **Networking & Security:** NS3, OMNeT++, OpenAirInterface, srsLTE, LTE/5G testbeds.
- **AI & ML:** Deep Learning, GANs, Federated Learning, Reinforcement Learning, GNNs, XAI.
- **Databases:** Oracle, SQL Server, MySQL, MongoDB; query optimisation, ER/EER modelling, normalisation.
- **Tools & Platforms:** Docker, Kubernetes, GitHub, Jenkins, LaTeX, DSpace.
- **Simulation:** MATLAB Simulink, Python-based wireless network simulation frameworks.

X. PERSONAL INFORMATION

- **Date of Birth:** 11.03.1978.
- **Nationality:** Cypriot.
- **Languages:** Greek (Native), English (Fluent), French (Proficient).
- **References:** Available upon request.