Dr. Ioannis A. Bartsiokas
Curriculum Vitae and List of Publications

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Personal Information

Name: Bartsiokas Ioannis
Occupation: Teaching/Research Fellow (EDIP) / Post-Doctoral Researcher / Wireless Communications Engineer
Email addresses: giannismpartsiokas@gmail.com, giannismpartsiokas@mail.ntua.gr
Professional Media Social Network: LinkedIn

Studies

Diplomas

10/2015 – 10/2020: National Technical University, School of Electrical and Computer Engineering, Diploma in Electrical and Computer Engineering (Grade 7.17/10, *Very Good*), October 2020. Thesis Topic: *"Multiple Antenna Systems in 5th Generation (5G) Broadband Networks"*. https://dspace.lib.ntua.gr/xmlui/bitstream/handle/123456789/51632/thesis_Bartsiokas_Giannis_final.pdf?sequence=1

10/2020 – 10/2023: National Technical University, School of Electrical and Computer Engineering, Department of Information Transmission Systems and Materials Technology, Doctoral Dissertation at the Intelligent Communications and Broadband Networks Laboratory (ICBNET) and Microwave and Fiber Optics Laboratory (MFOL) focusing on the study and implementation of innovative Machine Learning and Distributed Processing algorithms for radio resource assignment problems for 5G and B5G networks. *Dissertation* Topic: *"Machine and deep learning algorithms for radio resource management in 5G and beyond networks"* https://freader.ekt.gr/eadd/index.php?doc=54804&lang=en

Foreign Languages

English: University of Michigan, Certificate of Proficiency in English, issued on 24 November 2012.

German: Goethe-Zertifikat B, issued on 31 August 2011. Reference number 140-J-00679-11.

Professional Activity

Certifications – Accreditations

1. Member of the Technical Chamber of Greece (TEE) since March 2021. Registration number 154015.
2. Member of the Greek Section of the Union of Telecommunications Engineers, branch of the European Federation of Telecommunications Engineers (Fédération des Ingénieurs des Télécommunications de la Communauté Européenne - FITCE) since March 2021.

3. Member of the Hellenic Artificial Intelligence Society (EETN) since December 2025.

Teaching Experience

10/2020 – 1/2021: Provision of auxiliary teaching work in the courses: *"Computational Techniques for Information Transmission Systems"* (7th semester ECE, NTUA), *"Telecommunication Electronics"* (9th semester and postgraduate ECE, NTUA), *"Computational Electromagnetics"* (postgraduate ECE, NTUA).

2/2021 – 6/2021: Provision of auxiliary teaching work in the courses: *"Analysis of Linear Circuits"* (2nd semester ECE, NTUA), *"Microwaves"* (6th semester ECE, NTUA), *"Principles of Microwave and Optical Signal Transmission"* (8th semester ECE, NTUA).

10/2021 – 1/2022: Provision of auxiliary teaching work in the courses: *"Computational Techniques for Information Transmission Systems"* (7th semester ECE, NTUA), *"Telecommunication Electronics"* (9th semester and postgraduate ECE, NTUA), *"Computational Electromagnetics"* (postgraduate ECE, NTUA).

2/2022 – 6/2022: Provision of auxiliary teaching work in the courses: *"Analysis of Linear Circuits"* (2nd semester ECE, NTUA), *"Microwaves"* (6th semester ECE, NTUA), *"Principles of Microwave and Optical Signal Transmission"* (8th semester ECE, NTUA).

10/2022 – 1/2023: Provision of auxiliary teaching work in the courses: *"Computational Techniques for Information Transmission Systems"* (7th semester ECE, NTUA), *"Telecommunication Electronics"* (9th semester and postgraduate ECE, NTUA), *"Computational Electromagnetics"* (postgraduate ECE, NTUA). Participation in the design, teaching and practical workshops of the module newly added to the ECE, NTUA curriculum, *"Advanced Mobile Computing Technologies"* (9th semester ECE, NTUA). *Specifically, the above participation is mainly reflected in the chapters of the course that deal with the development of* Machine Learning algorithms and Distributed Processing for Information Transmission Systems (with an emphasis on radio resource management in 5G/B5G networks).

2/2023 – 6/2023: Provision of auxiliary teaching work in the courses: *"Analysis of Linear Circuits"* (2nd semester ECE, NTUA), *"Microwaves"* (6th semester ECE, NTUA), *"Principles of Microwave and Optical Signal Transmission"* (8th semester ECE, NTUA).

10/2023 – 1/2024: Provision of auxiliary teaching work in the courses: *"Analysis of Linear Circuits"* (2nd semester ECE, NTUA), *"Microwaves"* (6th semester ECE, NTUA), *"Principles of Microwave and Optical Signal Transmission"* (8th semester ECE, NTUA), *"Advanced Mobile Computing Technologies"* (9th semester ECE, NTUA).

9/2022 – 5/2025: Lecturer and Module Leader in the Information Technology Department of the American College of Greece (ACG).

5/2025 – present: Elected as Permanent Laboratory Teaching Staff (Teaching Faculty) in the School of Electrical and Computer Engineering, National Technical University of Athens (ECE NTUA), equivalent to Lecturer (Teaching) or Teaching/Research Fellow in the UK system. Modules:

- Linear Circuit Analysis (Undergraduate, 2nd semester)

- Modulation and Transmission Systems (Undergraduate, 6th semester)
- Microwaves (Undergraduate, 6th semester)
- Computational Techniques for Information Transmission Systems (Undergraduate, 7th semester)
- Mobile Computing Technologies with Machine Learning (Undergraduate, 9th semester)
- Telecommunication Electronics (Undergraduate, 9th semester)
- Broadband Networks (Undergraduate, 9th semester)
- Internet Technologies and Broadband Networks (Postgraduate, fall semester)
- Software Technologies for Service Provision in Communication Networks (Postgraduate, spring semester)
- Internet of Things Technologies: Theory and Practice (Undergraduate, 9th semester, School of Applied Mathematical and Physical Sciences, NTUA)

Teaching Notes

2022: I. S. Venieris and D.-T. Kaklamani, "Machine and Deep Learning for Mobile Computing Technologies", teaching notes for Chapters 1–4 of the course "Advanced Mobile Computing Technologies" (9th semester ECE, NTUA, Stream T). Volume editors: I. Bartsiokas and I. Panopoulos, October 2022.

Professional Positions

5/2025 – present: Permanent Laboratory Teaching Staff, School of Electrical and Computer Engineering, National Technical University of Athens, equivalent to Lecturer (Teaching) or Teaching/Research Fellow in the UK system.

5/2025 – present: External Collaborator of “Intracom Defense S.A. (IDE)”. The role involves technical management of projects funded by the European Defence Fund (EDF), the European Space Agency (ESA) and Horizon Europe, and the development of secure communication systems.

9/2022 – 4/2025: External Collaborator of “Intracom Defense S.A. (IDE)” as a researcher and software engineer for wireless telecommunication systems, participating in projects funded by the European Defence Fund (EDF) and in the development of secure communication systems.

6/2022 – 8/2023: External collaboration with “E & K Strategies” on software applications for the processing, visualisation and knowledge mining of financial data, including applications for sales forecasting and automatic selection of business strategies using data analysis and machine learning techniques.

9/2020 – 10/2020: Internship, supported by ECE NTUA, at “OTE S.A.” and specifically at the “OTE Academy” research centre. The internship covered the development and parameterisation of a fully functional 5G system (core network (CN) and radio access network (RAN)) using open-source

software, based on EURECOM's OpenAirInterface (OAI) (Sophia Antipolis, France). The company has used this system in numerous national and European-funded programmes.

9/2017 – 2/2020: Web developer during undergraduate studies at "Hartling IT", developing websites (e.g. for the Athens Medical Association) and databases of court decisions in medical law.

Participation in R&D Projects and Research Project Management

From 11/2026: Technical Manager for the ESA project STARWAVE-6G.

9/2026 – present: Technical Manager (co-lead) for the ESA project SIRIUS (ESA AO/1-12937/25/UK/ND).

12/2025 – present: EDF 2024 project "5G COMPAD 2.0" (GA 101218568, https://5gcompad.eu/). Technical lead in Task 2.3.2, as External Collaborator of IDE, on dynamic network selection and multi-access orchestration.

9/2025 – present: EDF 2023 project "MARTE" (project factsheet). Research Engineer, as External Collaborator of IDE.

3/2025 – 8/2026: HERMES H2020 Project (https://www.h2020-hermes.eu/). Technical Manager, as External Collaborator of IDE. The project was completed in August 2026.

12/2022 – 11/2025: EDF 2021 project "5G COMPAD" (GA 101103519, https://5gcompad.eu/). Technical management of the project, coordination of the IDE working groups as an External Collaborator, development of specifications, study of software and network architecture, and design and implementation of a demonstration together with the Greek companies "Eight Bells S.A." and "Space Hellas S.A.". The demonstration addressed the cooperation of 5G communication systems with IP radio systems to provide seamless connectivity and high quality of service (QoS) when users switch between networks. Participation in plenary meetings in Oulu, Finland (June 2023) and at the Ericsson AB facilities in Kista, Sweden (October 2023).

Reviewer at International Scientific Conferences, Journals and Books

2026 – present: IEEE Transactions on Aerospace and Electronic Systems, IEEE Network

2025 – present: IEEE Open Journal of the Communications Society, IEEE Wireless Communications Letters, Springer The Journal of Supercomputing, Springer Scientific Reports, Springer Networks, Springer Wireless Personal Communications

2024 – present: Elsevier Computer Networks, IEEE Access

2023 – present: IEEE Communications Surveys & Tutorials, IGI Global Encyclopedia of Information Science and Technology, MDPI Telecom, MDPI Sensors, MDPI Applied Sciences

Guest Editor at Scientific Journals

2026: MDPI Systems Special Issue *"Trustworthy and Autonomous Distributed Systems"*

2025: MDPI Electronics Special Issue *"Advances in 5G and Beyond Mobile Communication"*

2025: MDPI Network Special Issue *"Advances in 5G and Beyond Mobile Communication"*

Awards and Distinctions

2023: Thomaidion Award for the paper "A DL-Enabled Relay Node Placement and Selection Framework in Multicellular Networks", published in the international scientific journal "IEEE Access" (August 2023).

2022: Thomaidion Award for the paper "ML-Based Radio Resource Management in 5G and Beyond Networks: A Survey", published in the international scientific journal "IEEE Access" (August 2022).

2020: 2nd place in the 27th "Economia" competition on "Tourism: Destination Greece", organised by "Economic Review", with the paper "Strengthening the tourism product through 5G (Smart Tourism)".

2015: Award and monetary prize within the Eurobank action "The Great Moment for Education", for the best performance in the 2015 national exams among the students of the Lyceum of the Manesi Private Schools.

Talks and Events

2025: Presentation entitled "Towards Efficient Spectrum Sensing in B5G/6G Systems Using Walsh Receivers", Emerging Tech Conference Edge Intelligence (ETCEI 2025), 24–25 October 2025, University of West Attica, Ancient Olive Grove Conference Center, Athens, Greece.

2023: Presentation entitled "From the university to the labour market: applied research, advancement opportunities and work-life balance" in the online mentoring seminar "Professional issue/challenge management", organised by the research project "CALIPER – Linking Research & Innovation for Gender Equality" with the Alumni Network and the Equality Office of the School of Electrical and Computer Engineering, NTUA, 29 May 2023.

2022: Infocom World Conference, Divani Caravel Hotel, Athens.

2021: Infocom World Conference, Divani Caravel Hotel, Athens.

2020: Infocom World Conference, Divani Caravel Hotel, Athens.

Co-supervision of Diploma Theses

2025–2026: Co-supervision of 9 ongoing MSc and M.Eng. diploma theses.

Participation in the Supervision of Diploma Theses

2023–2024: Maria-Lamprini Bartsioka, "Development of advanced Physical Layer Security techniques with Machine/Deep Learning (ML/DL) in ad-hoc Next Generation Networks (Beyond 5G)".

2021–2022: Anastasios Koliatsis, “Scalability of 5th Generation (5G) Heterogeneous Networks with the Appropriate Selection of Relay Nodes (Relay Selection) and the Use of MIMO Antennas at the Base Station”.

2020–2021: Konstantinos Psilopanagiotis, “Optimization of 5th Generation Heterogeneous Networks using Relay Nodes and Multiple Antennas at the Base Station”.

Published Work

Doctoral Dissertation and Diploma Thesis

2020: National Technical University of Athens, School of Electrical and Computer Engineering, Department of Information Transmission Systems and Materials Technology. Diploma Thesis: “Multiple Antenna Systems in 5th Generation (5G) Broadband Networks”, graded Excellent.
https://dspace.lib.ntua.gr/xmlui/bitstream/handle/123456789/51632/thesis_Bartsiokas_Giannis_final.pdf?sequence=1

2023: National Technical University of Athens, School of Electrical and Computer Engineering, Department of Information Transmission Systems and Materials Technology. Doctoral Dissertation: “Machine and Deep Learning Algorithms for Radio Resource Management in 5G and Beyond Networks”, graded Excellent.
https://freader.ekt.gr/eadd/index.php?doc=54804&lang=en

Articles in International Scientific Journals

2026

[J-1] I. A. Bartsiokas, M.-L. A. Bartsioka, A. K. Papazafeiropoulos, D. I. Kaklamani and I. S. Venieris, “AI-Driven RF Fingerprinting for Secure Positioning Optimization in 6G Networks,” Microwave, vol. 2, no. 1, art. 1, 2026, doi: 10.3390/microwave2010001.
[J-2] A. Papazafeiropoulos, I. A. Bartsiokas, D. I. Kaklamani and I. S. Venieris, “On the Ergodic Capacity for SIM-Aided Holographic MIMO Communications,” IEEE Wireless Communications Letters, vol. 15, pp. 1120–1124, 2026, doi: 10.1109/LWC.2025.3649381.

2025

[J-3] I. A. Bartsiokas, C. Ntakolia, G. Avdikos and D. Lyridis, “Intelligent Multi-Objective Path Planning for Unmanned Surface Vehicles via Deep and Fuzzy Reinforcement Learning,” Journal of Marine Science and Engineering, vol. 13, no. 12, art. 2285, 2025, doi: 10.3390/jmse13122285.
[J-4] I. A. Bartsiokas, G. K. Avdikos and D. V. Lyridis, “Deep Learning-Based Beam Selection in RIS-Aided Maritime Next-Generation Networks with Application in Autonomous Vessel Mooring,” Journal of Marine Science and Engineering, vol. 13, art. 754, 2025, doi: 10.3390/jmse13040754.
[J-5] M.-L. A. Bartsioka, I. A. Bartsiokas, P. K. Gkonis, A. K. Papazafeiropoulos, D. I. Kaklamani and I. S. Venieris, “A Federated Learning Scheme for Eavesdropper Detection in

B5G-IIoT Network Orientations," IEEE Open Journal of the Communications Society, vol. 6, pp. 7169–7183, 2025.
[J-6] G. Vardoulias, I. A. Bartsiokas, N. Nikopoulos, G. Karachalios, G. Gardikis, N. Alampasis, I. Giannoulakis and E. Kafetzakis, "Linking Independent 5G Bubbles Using Tactical IP Radios - Part I: Laboratory Deployment and Testing," IEEE Access, vol. 13, pp. 136383–136394, 2025.

2024

[J-7] I. A. Bartsiokas, P. K. Gkonis, D. I. Kaklamani and I. S. Venieris, "A Federated Learning-Based Resource Allocation Scheme for Relaying-Assisted Communications in Multicellular Next Generation Network Topologies," Electronics, vol. 13, no. 2, art. 390, 2024, doi: 10.3390/electronics13020390.

2023

[J-8] I. A. Bartsiokas, P. K. Gkonis, D. I. Kaklamani and I. S. Venieris, "A DL-Enabled Relay Node Placement and Selection Framework in Multicellular Networks," IEEE Access, vol. 11, pp. 65153–65169, 2023, doi: 10.1109/ACCESS.2023.3290482.

2022

[J-9] I. A. Bartsiokas, P. K. Gkonis, D. I. Kaklamani and I. S. Venieris, "ML-Based Radio Resource Management in 5G and Beyond Networks: A Survey," IEEE Access, vol. 10, pp. 83507–83528, 2022, doi: 10.1109/ACCESS.2022.3196657.

Articles in Peer-Reviewed International Conference Proceedings

2026

[CONF-1] I. A. Bartsiokas, P. Vlachos, C. Dehos and F. Rivet, "Experimental Evaluation of a Low-Power Ultra-Wideband Receiver for Spectrum Sensing," IEEE International Conference on Electronics, Circuits and Systems (ICECS), Thessaloniki, Greece, 2026 (accepted).
[CONF-2] M.-L. A. Bartsioka, I. A. Bartsiokas, A. K. Papazafeiropoulos, M. A. Seimeni, D. I. Kaklamani and I. S. Venieris, "FRIEND: Federated Learning for Joint Optimization of Multi-RIS Configuration and Eavesdropper Intelligent Detection in B5G Networks," in Proc. 29th Conference on Innovation in Clouds, Internet and Networks (ICIN), Athens, Greece, 2026, pp. 1–8, doi: 10.1109/ICIN69025.2026.11481830.
[CONF-3] M.-L. A. Bartsioka, I. A. Bartsiokas, A. D. Panagopoulos, D. I. Kaklamani and I. S. Venieris, "Federated Learning-driven Beam Management in LEO 6G Non-Terrestrial Networks," 2026 International Applied Computational Electromagnetics Society (ACES) Symposium, Thessaloniki, Greece, 2026 (accepted).

2025

[CONF-4] M.-L. A. Bartsioka, I. A. Bartsiokas, P. K. Gkonis, D. I. Kaklamani and I. S. Venieris, "ML-Enabled Eavesdropper Detection in Beyond 5G IIoT Networks," in Proc. 2025 IEEE 30th Symposium on Computers and Communications (ISCC), Bologna, Italy, 2025.
[CONF-5] A. Papazafeiropoulos, I. A. Bartsiokas, P. Kourtessis, D. I. Kaklamani and I. S. Venieris, "On the Mutual Information of Large Stacked Intelligent Metasurfaces Based on Statistical CSI," in Proc. 2025 IEEE 36th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), Istanbul, Türkiye, 2025.
[CONF-6] I. A. Bartsiokas, P. Vlachos, M. Tzortzakakis, G. Karachalios and C. Dehos, "Towards Efficient Spectrum Sensing for 5G/B5G Communications Using Walsh Receivers," Emerging Tech Conference Edge Intelligence (ETCEI), Athens, Greece, October 2025.

2022

[CONF-7] K. A. Psilopanagiotis, I. A. Bartsiokas, P. K. Gkonis and D. I. Kaklamani, "On Relay-Based Subcarrier Allocation and Power Management in 5G Multicellular Networks," in Proc. 2022 IEEE 95th Vehicular Technology Conference (VTC2022-Spring), Helsinki, Finland, 2022, pp. 1–6, doi: 10.1109/VTC2022-Spring54318.2022.9861029.

Book Chapters

2025

[B-1] I. A. Bartsiokas, P. K. Gkonis, A. K. Papazafeiropoulos, D. I. Kaklamani and I. S. Venieris, "Federated Learning for 6G HetNets' Physical Layer Optimization: Perspectives, Trends, and Challenges," in Encyclopedia of Information Science and Technology, 6th ed., IGI Global, 2025, pp. 1–28, doi: 10.4018/978-1-6684-7366-5.ch070.

Preprints

2026

[P-1] I. A. Bartsiokas, M.-L. A. Bartsioka, P. K. Gkonis, G. Vardoulias and A. Papazafeiropoulos, "AI-Enabled Hierarchical Network Selection in Integrated 6G TN-NTN Architectures," Preprints, August 2026, https://www.preprints.org/manuscript/202608.1815.

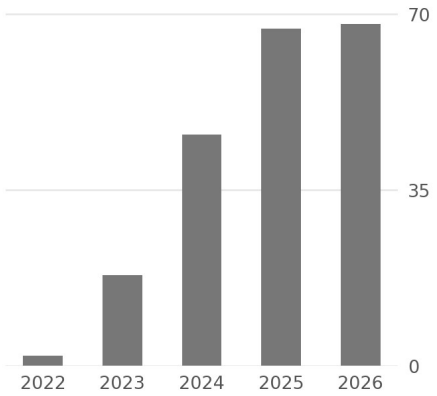
Citations by Other Researchers (Source: Google Scholar)

The following information has been updated on 20/09/2026. For the latest update you can visit the website:
https://scholar.google.com/citations?user=pjGyAn8AAAAJ

Citation Indexes

	Total	*From 2021*
Citations	202	201
h-index	6	6
i10-index	4	4

Citations per Year



Fields of Research Activity

My research interests fall into the following categories:

1) Advanced Physical Layer Techniques for efficient Radio Resource Management (RRM) in next generation communication systems (5G/B5G/6G).
2) Development of Machine, Deep, Reinforcement Learning and Distributed Processing algorithms for new generation communication systems (5G/B5G/6G).
3) Physical Layer Security (PLS) algorithms for new generation communication systems (5G/B5G/6G) and ad-hoc networks (e.g. MANETs, FANETs).