

# Ioannis Panitsas

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## Research Area

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I am a fourth-year Ph.D. candidate in Electrical and Computer Engineering at Yale University, working at the intersection of next-generation wireless networks (5G/6G, Open-RAN) and machine learning.

Research interests: • network optimization • network security • networked systems • learning-driven systems

## Education

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<b>Yale University</b> , New Haven, CT, USA Ph.D. Candidate in Electrical and Computer Engineering Advisor: Prof. <i>Leandros Tassiulas</i>	08/2022 – 08/2027
<b>Yale University</b> , New Haven, CT, USA M.Phil. in Electrical and Computer Engineering	08/2022 – 05/2025
<b>Yale University</b> , New Haven, CT, USA M.Sc. in Electrical and Computer Engineering	08/2022 – 05/2024
<b>School of Military Engineering</b> , Loutraki, Greece 2nd Lieutenant, Engineering Corps, Hellenic Army	03/2021 – 05/2022
<b>University of Patras</b> , Patras, Greece B.Sc. & M.Sc. in Electrical and Computer Engineering Advisor: Prof. Dimitrios Serpanos	09/2016 – 07/2021

## Publications

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- **I. Panitsas**, T. Atalay, D. Stojadinovic, A. Stavrou, and L. Tassiulas, "SlicePilot: Demystifying Network Slice Placement in Heterogeneous Cloud Infrastructures," accepted to *IEEE International Conference on Computer Communications (INFOCOM)*, 2026.
- **I. Panitsas**, I. Ofeidis, and L. Tassiulas, "FedJam: Multimodal Federated Learning Framework for Jamming Detection," accepted to *IEEE International Conference on Computer Communications (INFOCOM)*, 2026.
- **I. Panitsas**, T. Atalay, D. Stojadinovic, A. Stavrou, and L. Tassiulas, "5GC-Bench: A Framework for Stress-Testing and Benchmarking 5G Core VNFs," accepted to *IEEE Wireless Communications and Networking Conference (WCNC)*, 2026.
- **I. Panitsas**, A. Mudvari, A. Maatouk, and L. Tassiulas, "A Deep and Transfer Learning Approach for Handover Management in O-RAN," accepted to *IEEE Wireless Communications and Networking Conference (WCNC)*, 2026.
- **I. Panitsas**, Y. Yigit, L. Tassiulas, L. Maglaras, and B. Canberk, "JamShield: A Machine Learning Detection System for Over-the-Air Jamming Attacks," *Proceedings of the IEEE International Conference on Communications (ICC)*, 2025.
- **I. Panitsas**, A. Mudvari, and L. Tassiulas, "D2Q Synchronizer: Distributed SDN Synchronization for Time-Sensitive Applications," *Proceedings of the IEEE International Conference on Machine Learning for Communication and Networking (ICMLCN)*, 2025.
- Y. Yigit, **I. Panitsas**, L. Maglaras, L. Tassiulas, and B. Canberk, "Cyber-twin: digital twin-boosted autonomous attack detection for vehicular ad-hoc networks," *Proceedings of the IEEE International Conference on Communications (ICC)*, 2024.
- A. Feng, A. Varvarigos, **I. Panitsas**, D. Fernandez, J. Wei, Y. Guo, J. Chen, A. Maatouk, L. Tassiulas, and R. Ying, "TelecomTS: A Multi-Modal Observability Dataset for Time Series and Language Analysis," *arXiv preprint arXiv:2510.06063*, 2025.

## Industry Experience

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<b>Wireless Systems Research Intern</b> , Nokia Bell Labs – Murray Hill, NJ, USA	01/2026 – 05/2026
• Working on next-generation AI-native radio access network architectures.	

**Research Scientist Intern**, A2 Labs – Arlington, VA, USA 07/2025 – 08/2025

- Implemented a topology orchestrator for optimal slice placement in heterogeneous cloud infrastructures.
- Built *5GC-Bench*, a benchmarking framework for stress-testing and profiling 5G Core VNFs.

**Research Scientist Intern**, Kryptowire Labs – Arlington, VA, USA 07/2024 – 08/2024

- Developed *SlicePilot*, a reinforcement learning-based framework for online VNF placement in heterogeneous cloud environments.

**Embedded Software Engineer Intern**, Renesas Electronics – Patras, Greece 08/2020 – 10/2020

- Performed link-layer penetration testing and security evaluation of the Bluetooth Low Energy 5.0 protocol, identifying protocol-level vulnerabilities through crafted over-the-air exploits.

## Teaching Experience

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**Teaching Assistant**, Yale University – New Haven, CT, USA 01/2025 – 05/2025

- Course: Introduction to Computing for Engineers and Scientists, ENAS 130

**Teaching Assistant**, Yale University – New Haven, CT, USA 08/2024 – 12/2024

- Course: Introduction to Communications and Control, EENG 202

**Teaching Assistant**, Yale University – New Haven, CT, USA 01/2024 – 05/2024

- Course: Introduction to Computing for Engineers and Scientists, ENAS 130

## Workshops

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- **CyberPowder Fellows Program 2025**, University of Utah, Salt Lake City, UT, USA  
Participated in an on-site research workshop on the POWDER wireless testbed.
- **Open AI Cellular (OAIC) Workshop 2024**, Mississippi State University, Starkville, MS, USA  
Engaged in hands-on experimentation at the OAIC research workshop.
- **Young Gladiators Workshop 2024**, Northeastern University, Boston, MA, USA  
Participated in an on-site research workshop on the Colosseum wireless emulator.

## Reviewer Roles

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### Journals

- IEEE Communications Magazine
- IEEE/ACM Transactions on Networking

### Conferences

- ACM SIGMETRICS
- IEEE DySPAN
- IEEE Military Communications Conference

## Skills

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- **Programming:** Python, C/C++, OpenMP, JavaScript, Java, SQL, MongoDB, HTML, CSS, Node.js
- **Tools:** Docker, Kubernetes, Helm

## Languages

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- English (fluent), Greek (native)