Ioannis Panitsas

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Research Area

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

Yale University, New Haven, CT, USA — 08/2022 – 08/2027
Ph.D. Candidate in Electrical and Computer Engineering
Advisor: Prof. *Leandros Tassiulas*

Yale University, New Haven, CT, USA — 08/2022 – 05/2025
M.Phil. in Electrical and Computer Engineering (Honors)

Yale University, New Haven, CT, USA — 08/2022 – 05/2024
M.Sc. in Electrical and Computer Engineering (Honors)

School of Military Engineering, Loutraki, Greece — 03/2021 – 05/2022
2nd Lieutenant, Engineering Corps, Hellenic Army

University of Patras, Patras, Greece — 09/2016 – 07/2021
B.Sc. & M.Sc. in Electrical and Computer Engineering (Top 2%)
Advisor: Prof. Dimitrios Serpanos

Publications

- **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

Wireless Systems Research Intern, Nokia Bell Labs – Murray Hill, NJ, USA — 01/2026 – 05/2026

- Analyze and characterize system-level performance trade-offs of radio access network (RAN) components using experimental wireless testbeds.

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

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

- **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

- IEEE Communications Magazine
- IEEE/ACM Transactions on Networking
- ACM SIGMETRICS
- IEEE Military Communications Conference

Skills

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

Languages

- English (fluent), Greek (native)