

Dimitris Selis

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RESEARCH SCOPE

Cloud-Edge Computing, Elastic resource management, ML for Systems, Reinforcement Learning

EDUCATION

Polytechnic University of Catalonia (UPC)

PhD in Telecommunications Engineering

Advisors: Luis Alonso Zárate & Christos Verikoukis

Dissertation: Elastic Resource Management and Scheduling in Cloud-Edge Infrastructures for Beyond 5G Autonomous Networks.

Jan 2023 – Present
Barcelona, Spain

University of Patras

MEng in Computer Engineering

Thesis: Designed and deployed a container-based weather forecasting platform on GKE.

Oct 2014 – Sep 2021
Patras, Greece

EXPERIENCE

Athena Research & Innovation Center

Collaborating Researcher

Jan 2023 – Present
Athens, Greece

- Designed, built and evaluated Kubernetes-based cloud-edge distributed systems, improving scalability, reliability and performance under workload uncertainty.
- Technical contribution to EU-funded large-scale engineering projects, including system architecture design, implementation planning and cross-team coordination.

Saphetor

Software Engineer / Research Intern

Sep 2021 – Mar 2022
EPFL Lausanne, Switzerland

- Developed anomaly detection pipelines for genomic data.
- Designed end-to-end data analysis workflows.

CONFERENCE PUBLICATIONS

- **D. Selis**, K. Ramantas, L. Alonso, J. S. Vardakas and C. Verikoukis, "KARMA: Knowledge Aware Resource Management and Auto-scaling for cloud-edge workloads", in Proceedings of the IEEE Global Communications Conference (GLOBECOM 2025), in press.
- **D. Selis**, K. Ramantas, L. Alonso, J. S. Vardakas and C. Verikoukis, "ADDAPT6G: Advanced Double Dueling Architecture for Proactive Tuning in 6G Networks," ICC 2025 - IEEE International Conference on Communications, Montreal, QC, Canada, 2025, pp. 1857-1862 doi:10.1109/ICC52391.2025.11160944
- Y. Kyriakopoulos, **D. Selis**, K. Ramantas and C. Verikoukis, "Scaling-Ops: SLA-Compliant Resource Management via Offline Reinforcement Learning Pipeline," 2025 IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN), in press.
- G. Famitafreshi, M. Trigka, **D. Selis**, J. Vardakas and C. Verikoukis, "An Innovative Multi-Scale Strategy-Based Decision Engine for Zero-Touch Management and Orchestration in 6G," 2024 IEEE 29th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD), Athens, Greece, 2024, pp. 1-6, doi:10.1109/CAMAD62243.2024.10942611

JOURNAL PUBLICATIONS

- **D. Selis**, K. Ramantas, L. Alonso and C. Verikoukis, "MIND the Proximity: A Transformer-based RL Scheduler and Placement Optimizer for Cloud-edge Workloads, *IEEE Transactions on Cloud Computing*, under review.

AWARDS

IEEE CSIM 6G Industrial Dissemination Day (IDD) Award

Recognized for excellence in originality, technical rigor and industry relevance of research contributions. Awarded travel sponsorship for IEEE ICC 2025

2025

TEACHING EXPERIENCE

Teaching Assistant 5G Architectures, enabling technologies and KPIS (CEIDNE577)	Spring 2024, Spring 2025 CEID, University of Patras
Teaching Assistant Fundamentals of Cellular Networks (CEIDNE592)	Fall 2024 CEID, University of Patras

STUDENT ADVISEES

Yannis Kyriakopoulos MEng CS SLA-Compliant Resource Management via Offline Reinforcement Learning	2024-2025
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TECHNICAL SKILLS

Orchestration & Monitoring

Docker · Kubernetes · Prometheus · Grafana/K6 · KEDA

Machine Learning & Deep Learning

PyTorch · StableBaselines3 · TensorFlow · Transformers/Hugging Face

MLOps

KubeFlow · SageMaker

Data Storage & Indexing

Relational: MySQL · PostgreSQL · SQLite

Time-series: InfluxDB

Vector-search: Qdrant

Programming

Bash · Python · C++ · Go · Javascript

LANGUAGES

Greek Native

English Fluent

French Upper Intermediate

Spanish Conversational

REVIEWER / PROGRAM COMMITTEE

IEEE Networking Letters	2024-2026
IEEE International Conference on Cloud Networking (Cloud-Net)	2026
IEEE Conference on Network Function Virtualization and Software Defined Networks	2025
IEEE Global Communications Conference (GLOBECOM)	2025
IEEE International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD)	2024