

# Kostas Chartsias

**SENIOR R&D ENGINEER  
ELECTRICAL AND COMPUTER ENGINEER, NTUA**

**Contact information:** kchartsias@yahoo.gr

---

## SUMMARY

Corporate Technical Coordinator and Solutions Architect for multiple ICT projects funded by the European Commission. Experienced in all phases of product and software/service lifecycle management. Actively involved in technical research, use case specification, requirements elicitation, architecture and system design, development, testing, technical reporting, and deliverable preparation. Skilled in balancing time, cost, and scope throughout projects, while concurrently assessing quality and managing risks.

## EXPERIENCE

**INTRACOM TELECOM – Senior R&D Engineer, EU Projects**

(Apr 2016 - Nov 2018), (Nov 2019 – Present)

### Strategic Skills:

Contributions to several EU proposals to drive innovation in Intracom's product line:

- Responsible for positioning Intracom's wireless X-Haul solutions in next-generation cell-free architecture.
- Led efforts to enhance synchronization functionalities (IEEE 1588) in our product line to align with O-RAN transport network requirements.
- Positioned disaggregated X-Haul as an edge computing platform by enabling Docker Swarm on disaggregated routers, making it a foundational building block of the cloud-to-edge continuum.

### Business Analyst/Solutions Architect Skills:

- Designed resource-balancing and network availability algorithms for the (Network Management System) NMS application of WiBAS PtMP wireless systems.
- Defined requirements, software architecture, and relevant protocols to support network slicing on Intracom's wireless products and NMS.
- Developed specifications and tested the NETCONF adaptation of Intracom's baseband modules based on ONF TR-532 YANG models.
- Outlined requirements and technical solutions to support edge computing workloads on third-party switches and routers (Alpha whitebox switches and Adtran Network Operating System).
- Specified requirements and software architecture for infrastructure monitoring applications (3-tier and supportive microservices).
- Defined requirements, technical solutions, and Bill of Materials (BOM) for Intracom's first installation of telecommunications equipment on IPTO's high-voltage electric towers.

**Technical Skills:**

- Evaluated various algorithms (dynamic programming and metaheuristics) to solve resource-constrained shortest path problems.
- Assessed different deep learning algorithms for traffic prediction in wireless X-Haul networks.
- Conducted link budget calculations (free-space path loss, fog, gas, and rain losses).
- Created and conducted test cases for various network management protocols (NETCONF, SNMP) and APIs (REST).
- Developed and containerized 3-tier applications for infrastructure monitoring (e.g., switches, servers, wireless systems, smart plugs).

**Technologies:**

- Python, JavaScript (React front-end, Node.js/Express back-end), Java, Linux bash scripts, packet-capturing tools (tcpdump, Wireshark), network traffic generators (iPerf), observability tools (Prometheus, Grafana, and custom Prometheus exporters), databases (SQLite and MongoDB), Postman, Docker, VirtualBox.

**Projects:**

SNS JU, Call 1 – Stream C: 6G-BRICKS

Horizon Europe Cluster 6: XGAIN (Task Leader)

H2020 5GPP: MARSAL, TERAway, 5G-VICTORI, 5G-VINNI, 5G BLUESPACE, SPEED-5G, CHARISMA

**Hellenic Navy (Nov 2018 – Nov 2019)****Systems and Network Engineer (Feb 2019 - Nov 2019)****Role:**

- Network mapping and rack management (Patch panels, Cabling).
- Troubleshooting and resolving hardware and software problems on computers and networks.
- Installation, configuration and maintenance of operating systems (CentOS, Windows 7/10).
- Configuration of Mikrotik's Cloud Hosted Routers for different networking labs.  
These involved protocols and technologies such as OSPF, BGP, MPLS/LDP, MPLS L3 VPN, IPsec VPN and traffic policing using MikroTik queues.

**NCSR "DEMOKRITOS" - Internet Systematics Lab member****SDN Engineer (Oct 2015 – Mar 2016)****Role:**

- Evaluation of different SDN controllers (POX, Ryu, OpenDaylight, ONOS).
- Several network functions of Ariadne datacenter were implemented using HP OpenFlow-enabled switch and ONOS SDN controller.

---

**EDUCATION**

Sep 2009 – Oct 2015

Meng, Electrical and Computer Engineering, National Technical University of Athens

Thesis: Use of OpenFlow for entropy-based DDoS detection and hybrid honeypots.

---

## CERTIFICATIONS

Udemy: Spring Framework Master Class – Java Spring the Modern Way, Kubernetes and Docker: The Container Masterclass

Coursera: Data Analysis with Python, Machine Learning with Python

---

## PUBLICATIONS

Reference: <https://scholar.google.com.hk/citations?user=XQZe3GsAAAAJ>

- [1] Unlocking the Path Towards AI-Native Networks with Optimized Lightweight Large Language Models July 2024, DOI: 10.1109/MeditCom61057.2024.10621076, Conference: 2024 IEEE International Mediterranean Conference on Communications and Networking (MeditCom)
- [2] Democratizing Predictive Analytics with Generative Artificial Intelligence towards AI-Native Networks, June 2024, DOI: 10.1109/ISCC61673.2024.10733560, Conference: 2024 IEEE Symposium on Computers and Communications (ISCC)
- [3] Real-Time Sub-THz Link Enabled Purely by Optoelectronics: 90–310 GHz Seamless Operation February 2023, IEEE Photonics Technology Letters IEEE Photonics Technology Letters, DOI: 10.1109/LPT.2023.3235932
- [4] AI-assisted X-Haul in O-RAN ecosystem, July 2022, DOI: 10.1109/CSNDSP54353.2022.9908013 Conference: 2022 13th International Symposium on Communication Systems, Networks and Digital Signal Processing (CSNDSP)
- [5] Experimentation Scenarios for Machine Learning-Based Resource Management May 2022, DOI: 10.1007/978-3-031-08341-9\_11, In book: Artificial Intelligence Applications and Innovations. AIAI 2022 IFIP WG 12.5 International Workshops, MHDW 2022, 5G-PINE 2022, AIBMG 2022, ML@HC 2022, and AIBEI 2022, Hersonissos, Crete, Greece, June 17–20, 2022, Proceedings
- [6] 5G-VICTORI: Future Railway Communications Requirements Driving 5G Deployments in Railways June 2021, DOI: 10.1007/978-3-030-79157-5\_2, In book: Artificial Intelligence Applications and Innovations. AIAI 2021 IFIP WG 12.5 International Workshops
- [7] SDN-Enabled THz Wireless X-Haul for B5G, June 2021, DOI:10.1109/EuCNC/6GSummit51104.2021.9482494, Conference: 2021 Joint European Conference on Networks and Communications & 6G Summit (EuCNC/6G Summit)
- [8] Proof-of-Concept of Capacity Expansion Through Extended Dynamic Spectrum Access for 5G May 2018, DOI: 10.1109/EuCNC.2018.8442827, Conference: 2018 European Conference on Networks and Communications (EuCNC)
- [9] Breaking the Access Technologies Silos by Enhancing MAC and RRM in 5G+ Networks May 2018, DOI: 10.1109/EuCNC.2018.8442850, Conference: 2018 European Conference on Networks and Communications (EuCNC)
- [10] Terahertz Technologies to Deliver Optical Network Quality of Experience in Wireless Systems Beyond 5G, April 2018, IEEE Communications Magazine, DOI: 10.1109/MCOM.2018.1700890
- [11] SDN/NFV-based end to end network slicing for 5G multi-tenant networks May 2017, DOI: 10.1109/EuCNC.2017.7980670, Conference: 2017 European Conference on Networks and Communications (EuCNC)

---

## ORGANIZATIONS

Technical Chamber of Greece, Electrical Engineer