



Georgios P. Katsikas

Ph.D., Computer & Networked Systems

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[gkatsikas.github.io](https://github.com/gkatsikas)

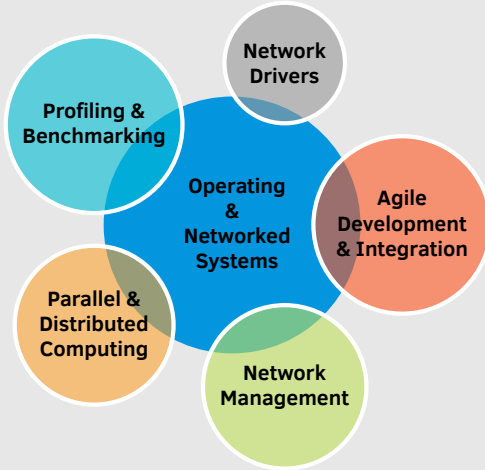
[georgioskatsikas](https://www.linkedin.com/in/georgioskatsikas)

[Google Scholar](https://scholar.google.com/citations?user=gkatsikas)

[gkatsikas](https://github.com/gkatsikas)

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Technical Skills Overview



Programming

• Linux • C • C++ • Java • Python

SDN (ETSI TFS, P4, K8s SDN CNIs)

NFV (K8s, ProxMox, DPDK, ETSI OSL)

• Git • Docker • Helm • Ansible

Education

Ph.D., Computer & Networked Systems

KTH Royal Institute of Technology
Dep. of Communication Systems
2014 - 2018 | Stockholm, Sweden

M.Sc., Comm/ation Systems & Networks

National & Kapodistrian University of Athens
Dep. of Informatics & Telecommunications
2010 - 2012 | Athens, Greece

B.Sc., Informatics & Telecommunications

National & Kapodistrian University of Athens
Dep. of Informatics & Telecommunications
2005 - 2010 | Athens, Greece

Research & Development Summary

Research Published at top systems conferences ([NSDI'18](#), [CoNEXT'19](#), [NSDI'22](#)) and journals ([ACM TOCS'21](#)). My research is featured in the [ACM Technews](#), [PHYS.ORG](#), [ECN](#), [KTH](#), and [APNIC](#). Reviewer for scientific journals (e.g., IEEE/ACM Transactions on Networking). Since 2010, I have been participating in 17 (mainly EU) research projects.

Development [Module owner](#) and main contributor to the industrial-grade network operating system [ONOS](#) and the [Data Plane Development Kit \(DPDK\)](#). Co-leading open source projects in SDN & NFV: [ETSI TFS](#), [FastClick](#), Metron's [control](#) and [data](#) planes, as well as [RSS++](#) and [NICBench](#).

Experience

Nov. 2019 **Technical Project Manager & Product Owner** [UBITECH](#)

Present Mission: Design & implement a state-of-the-art [service and resource orchestrator](#) for modern 5G and beyond infrastructures using:

- Standardized TM Forum service and resource [APIs](#).
- Integration with a standardized OSS titled [ETSI OpenSlice](#).
- Infrastructure as Code tools (OpenTofu, Argo-CD, git, & more).
- A cloud-native [5G software stack](#).
- An SDN fabric in P4 through contributions to [ETSI standards](#).

Tools: Kubernetes, ProxMox, OpenTofu, gitops, P4, DPDK, Open5GS.

Hardware: AMD EPYC architecture, 200 GbE NVIDIA Bluefield-2 and 100 GbE Xilinx Alveo SN 1000 SmartNICs, 400 GbE Intel Tofino-2 P4 switch, NVIDIA JETSON GPUs, and Amarisoft & ETTUS 5G hardware.

Oct. 2019 **Post Doctoral Researcher** [KTH NSLab](#)

Sep. 2020

- [Reframer](#) packet scheduler for low latency Internet services.
- Benchmarked the classifiers of 100-200 GbE Mellanox NICs.

Tools: DPDK, Click, OVS, Mellanox drivers, and DevOps.

Hardware: Intel architectures and Mellanox Smart NICs.

Feb. 2019 **Military Service** [Computer Science and Research Division @ Greek Army](#)

Oct. 2019 Networked systems engineer at the Department of Networking.

Oct. 2018 **Post Doctoral Researcher** [KTH NSLab](#)

Dec. 2018

- Integrated NFV service chains with blackboxes at 100 Gbps.
- Designed [RSS++](#) for intra-server load-balancing at 100 Gbps.

Tools: Linux, ONOS, DPDK, Click, SR-IOV, KVM, and DevOps.

Hardware: Intel architectures and Mellanox NICs.

May 2017 **Industrial Ph.D. Student** [RISE](#) and [KTH NSLab](#)

Sep. 2018

- Implemented [Metron](#) for NFV service chaining at 100 Gbps.
- Implemented dynamic scaling techniques for NFV at 10 Gbps.

Tools: ONOS, DPDK, Click, OpenFlow, REST, and DevOps.

Hardware: Intel architecture, Mellanox NICs, & OpenFlow switches.

Jul. 2014 **Licentiate Student (Halfway to Ph.D.)** [KTH NSLab](#)

Apr. 2017

- Synthesized the internal operations of NFV service chains with [SNF](#), enabling complex service chains to operate at line-rate 40 Gbps.
- Combined profiling and task scheduling techniques with I/O batching ([SCC](#)) to reduce the latency of traversing NFV service chains.

Tools: Linux, Perf, Intel PCM, DPDK, ixgbe, Click, OpenFlow, and Git.

Hardware: Intel architecture, Intel NICs, and OpenFlow switches.

Oct. 2013 **Research Assistant** [IMDEA Networks](#)

Jun. 2014

- Integrated heterogeneous SDN control planes.

Tools: Linux, OpenDaylight, Ryu/POX, Mininet, OpenFlow, and SVN.

Apr. 2010 **Research Assistant** [NKUA SCAN Lab](#)

Sep. 2013

- ML tools for autonomic network management in wireless networks.

Tools: Linux (OpenWrt), Java, REST, and SVN.