

EDUCATION	National Technical University of Athens, Greece PhD candidate, Computing Systems Laboratory 2017 - ongoing <ul style="list-style-type: none">• Subject: Optimizing OS-HW interaction for modern datacenter ISAs• Advisor: Prof. Georgios Goumas National Technical University of Athens, Greece Diploma in Electrical and Computer Engineering 2005 - 2011 <ul style="list-style-type: none">• Diploma Thesis: HPC Interconnects in Virtualized Environments• Advisor: Prof. Nectarios Koziris
RESEARCH INTERESTS	Operating Systems, Virtual Memory, OS-HW interaction, Virtualization, Unikernels, Serverless Computing
RESEARCH EXPERIENCE	Institute of Communication and Computer Systems, Athens, Greece <i>Aero: Software ecosystem for the EU processor</i> January 2022 - present Contributing to the deployment, evaluation and optimization of a fully-fledged serverless and cloud stack on ARMv8-A processors in the context of the Aero Horizon2020 EU research project. <i>DAPHNE: Integrated Data Analysis Pipelines</i> December 2020 - present Contributing to the development of the DAPHNE runtime system (C++) and its interface with the DAPHNE LLVM/MLIR compiler toolchain in the context of the DAPHNE Horizon2020 EU research project. <i>ACTiCLOUD: Resource efficiency in the cloud</i> October 2017 - December 2019 Contributed to the development of the profiling and decision making component (Python) of the ACTiCLOUD Horizon2020 EU research project.
PROFESSIONAL EXPERIENCE	Greek Research and Academic Network, Athens, Greece <i>Cloud engineer</i> October 2011 - February 2016 Member of GRNET's okeanos IaaS cloud development team (Python/Django, C, CI) <i>Site Reliability Engineer</i> May 2015 - February 2016 Member of GRNET's network operations center (NOC) - Servers team, responsible for the deployment and maintenance of GRNET's cloud infrastructure. DPG Web Development, Athens, Greece <i>Site Reliability Engineer</i> June 2011 - October 2011 Deployment and maintenance of a host of web servers and services (LAMP stack) Computing Center, School of Electrical and Computer Engineering, NTUA, Greece <i>System and network administrator (part-time)</i> January 2008 - September 2010 System and network administration of the services, servers and workstations of the lab.

OTHER ACTIVITIES **Teaching Assistant**, Computing Systems Laboratory, ECE, NTUA

TA for the *OS and Advanced OS Courses*

September 2017 - present

Gentoo Linux Developer, Gentoo Foundation

Gentoo Kernel Maintainer

June 2011 - March 2017

SKILLS

Areas of expertise or familiarity:

- POSIX systems programming
- Linux kernel programming
- Virtualization (microVMs, unikernels)
- Cloud and serverless computing (containers, k8s, OpenStack, AWS)
- Site reliability engineering and (Linux) systems administration
- RESTful webapp development (Python Django, Python Flask)
- Across-the-stack debugging and troubleshooting

Programming languages:

- Fluent: C, Python, Shell scripting
- Familiar: Rust, C++, Go, assembly (x86, ARM)

Languages:

- English (fluent): Cambridge Certificate of Proficiency in English (CPE)
- German (basic familiarity): Goethe Institute Zentrale Mittelstufenprüfung (ZMP)

PUBLICATIONS

- Christos Katsakioris, Chloe Alverti, Konstantinos Nikas, et al. “FaaSCell: A Case for Intra-node Resource Management: Work-In-Progress”. In: *Proceedings of the 1st Workshop on Serverless Systems, Applications and Methodologies, SESAME 2023, Rome, Italy, 8 May 2023*. Ed. by Dmitrii Ustiugov, Rodrigo Bruno, Pedro Fonseca, et al. ACM, 2023, pp. 57–60. DOI: 10.1145/3592533.3592812. URL: <https://doi.org/10.1145/3592533.3592812>.
- Stratos Psomadakis and Georgios Goumas. “Transparent OS Support for Variable Translation Sizes”. In: *EuroSys’23 Poster session, Rome, Italy, May 2023*. ACM, 2023. URL: <https://2023.eurosys.org/accepted-posters.html#accepted-posters>.
- Patrick Damme, Marius Birkenbach, Constantinos Bitsakos, et al. “DAPHNE: An Open and Extensible System Infrastructure for Integrated Data Analysis Pipelines”. In: *12th Conference on Innovative Data Systems Research, CIDR 2022, Chaminade, CA, USA, January 9-12, 2022*. www.cidrdb.org, 2022. URL: <https://www.cidrdb.org/cidr2022/papers/p4-damme.pdf>.
- Chloe Alverti, Stratos Psomadakis, Vasileios Karakostas, et al. “Enhancing and Exploiting Contiguity for Fast Memory Virtualization”. In: *47th ACM/IEEE Annual International Symposium on Computer Architecture, ISCA 2020, Valencia, Spain, May 30 - June 3, 2020*. IEEE, 2020, pp. 515–528. DOI: 10.1109/ISCA45697.2020.00050. URL: <https://doi.org/10.1109/ISCA45697.2020.00050>.
- Orestis Lagkas Nikolos, Konstantinos Papazafeiropoulos, Stratos Psomadakis, et al. “Extending storage support for unikernel containers”. In: *Proceedings of the 5th International Workshop on Serverless Computing, WOSC@Middleware 2019, Davis, CA, USA, December 09-13, 2019*. ACM, 2019, pp. 31–36. DOI: 10.1145/3366623.3368138. URL: <https://doi.org/10.1145/3366623.3368138>.
- Stratos Psomadakis, Stefanos Gerangelos, Dimitrios Siakavaras, et al. “ACTiManager: An end-to-end interference-aware cloud resource manager”. In: *Proceedings of the 20th International Middleware Conference Demos and Posters, Middleware 2019, Davis, CA, USA, December 9-13, 2019*. ACM, 2019, pp. 27–28. DOI: 10.1145/3366627.3368114. URL: <https://doi.org/10.1145/3366627.3368114>.
- Vasileios Karakostas, Georgios I. Goumas, Ewnetu Bayuh Lakew, et al. “Efficient resource management for data centers: the ACTICLOUD approach”. In: *Proceedings of the 18th International Conference on Embedded Computer Systems: Architectures, Modeling, and Simulation, Pythagorion, Greece, July 15-19, 2018*. Ed. by Trevor N. Mudge and Dionisios N. Pnevmatikatos. ACM, 2018, pp. 244–246. DOI: 10.1145/3229631.3236095. URL: <https://doi.org/10.1145/3229631.3236095>.
- Aimilios Tsalapatis, Stefanos Gerangelos, Stratos Psomadakis, et al. “utmем: Towards Memory Elasticity in Cloud Workloads”. In: *High Performance Computing - ISC High Performance 2018 International Workshops, Frankfurt/Main, Germany, June 28, 2018, Revised Selected Papers*. Ed. by Rio Yokota, Michèle Weiland, John Shalf, et al. Vol. 11203. Lecture Notes in Computer Science. Springer, 2018, pp. 173–183. DOI: 10.1007/978-3-030-02465-9_12. URL: https://doi.org/10.1007/978-3-030-02465-9_12.
- Anastassios Nanos, Nikos Nikoleris, Stratos Psomadakis, et al. “A Smart HPC Interconnect for Clusters of Virtual Machines”. In: *Euro-Par 2011: Parallel Processing Workshops - CCPI, CGWS, HeteroPar, HiBB, HPCVirt, HPPC, HPSS, MDGS, ProPer, Resilience, UCHPC, VHPC, Bordeaux, France, August 29 - September 2, 2011, Revised Selected Papers, Part II*. Ed. by Michael Alexander, Pasqua D’Ambra, Adam Belloum, et al. Vol. 7156. Lecture Notes in Computer Science. Springer, 2011, pp. 398–406. DOI: 10.1007/978-3-642-29740-3_45. URL: https://doi.org/10.1007/978-3-642-29740-3_45.