

Giorgos Kappes

Postdoctoral Researcher & CoFounder with expertise on Systems ✉ giorgos@giorgoskappes.com ☎ +306978833573 📍 Ioannina, Greece 🌐 <https://giorgoskappes.com>

Researcher with 10+ years of experience in designing, developing, evaluating, optimizing system software for multitenant virtualization environments, and with strong hands on experience in deployment and management of enterprise-level IT infrastructure. His research interests include operating systems, data storage, and systems security.

EXPERIENCE

- **Postdoc research associate - TOPPERS project**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Nov 2023 - Today
- **Research associate - Homore project**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Nov 2022 - Feb 2023
- **CoFounder**
 - 📍 Polytropo Systems - Cloud Computing Startup
 - 📅 Nov 2022 - Feb 2023
- **Adjunct lecturer**
 - 📍 Dept of Computer Science & Engineering, UOI, GR
 - 📅 May 2022 - Sep 2022, Oct 2024 - Today
- **Postdoc research fellow - Dioni project**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Dec 2021 - Sep 2022
- **Engineer - Dioni project**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 May 2021 - Dec 2021
- **Research associate - Ofidia2 project**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Mar 2019 - Feb 2021
- **Research associate - Ofidia project**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Feb 2014 - Nov 2014

EDUCATION

- **Doctor of Philosophy (Ph.D) degree**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Jun 2021
 - 📖 Operating System support for cloud computing
- **Master of Science (M.Sc) degree**
 - 📍 Dept. of Computer Science & Engineering, UOI, GR
 - 📅 Oct 2013
 - 📖 Scalable access control for secure multitenant filesystems
- **Bachelor of Science (B.Sc) degree**
 - 📍 Dept of Computer Science, Univ. of Ioannina, GR
 - 📅 Feb 2011
 - 📖 Logging file access patterns for efficient filesystem search

SELECTED PUBLICATIONS

- Giorgos Kappes et al, **Diciclo: Flexible User-level Services for Efficient Multitenant Isolation**, ACM TOCS, vol 42, issue 1-2, 2024
- Giorgos Kappes et al, **A Family of Relaxed Concurrent Queues for Low-latency Operations and Item Transfers**, ACM TOPC, vol 9, no 4, 2022
- Giorgos Kappes et al, **Multitenant Access Control for Cloud-Aware Distributed Filesystems**, IEEE TDSC, Nov-Dec 2019
- Giorgos Kappes et al, **Faster FUSE Filesystems with Efficient Data Transfers**, ACM SIGOPS APSys, 2024
- Giorgos Kappes et al, **Asterope: A Cross-Platform Optimization Method for Fast Memory Copy**, ACM PLOS, 2021
- Giorgos Kappes et al, **Danaus: Isolation and Efficiency of Container I/O at the Client Side of Network Storage**, ACM Middleware, 2021
- Giorgos Kappes et al, **A user-level Toolkit for Storage I/O Isolation on Multitenant Hosts**, ACM SoCC, 2021

SKILLS

- **Languages:** Greek (Native), English (B2)
- **System design:** Secure, scalable, and efficient storage systems for the cloud, security protocols, threat modeling, security analysis
- **System development:** *Concurrency* concurrent algorithms and data structures, processes, threads, MPI, asynchronous/non-blocking I/O. *Networking* Berkeley/RAW sockets, RDMA. *Kernel* Linux, Windows Driver Model. *Security* OpenSSL, Crypto++. *Storage* Distributed storage systems concepts
- **System evaluation:** High-level analysis (filebench, sysbench, dbench, fio, mdtest, TPC Benchmarks). Low-level analysis (GDB, eBPF, ftrace, perf)
- **System management:** *Virtualization* Xen, KVM, UML, Docker, LXC. *Orchestration* OpenNebula, Openstack, Kubernetes. *Public Cloud* AWS, OCI. *Monitoring* Ganglia, Prometheus. *Storage* Ceph, GlusterFS, NFS, NetAPP ONTAP, ZFS
- **Programming Languages:** C, C++, Java, Fortran, SQL, Python, Bash