

DIMITRA GIANTSIDI

https://dgiantsidi.github.io/ · dimitra.giantsidi@gmail.com
Informatics Forum 1.05, University of Edinburgh
10 Crichton Street, EH8 9AB, Edinburgh, United Kingdom

I like to build robust and efficient distributed systems!

I am a final year PhD student at the University of Edinburgh, UK and as part of my research, I have worked on some interesting projects: a secure distributed transactional store (Trusted Execution Environments, RDMA and RocksDB), a shielded direct I/O network library for secure replication (Crash Fault Tolerance and BFT) and a fast shared log for serverless computing infrastructures (byte addressable storage, gRPC/TCP). I am currently designing a trusted NIC architecture for large-scale distributed systems based on SmartNICs.

PROFESSIONAL EXPERIENCE

ICSA, University of Edinburgh, UK <i>Research Assistant</i>	June 2023 - now
<ul style="list-style-type: none">· Implementation of an RDMA-based smartNIC architecture for improved security guarantees.· Design and optimization of robust networking protocols for fault tolerance.	
Confidential Computing Group, Microsoft Research, Cambridge, UK <i>Research Scientist Intern</i>	Sept 2021 - Dec 2021
<ul style="list-style-type: none">· Design and implementation of a single-node KV store resilient to timing-attacks.	
Cloud RnD, Intracom Telecom, Athens, Greece <i>Software & Systems Engineer</i>	Jul 2017 - Jul 2018
<ul style="list-style-type: none">· Performance and energy optimization of NFV services.	
Unversity of Edinburgh, UK and TUM, Germany <i>Thesis advisor and Teaching Assistant</i>	Sept 2019 - present
<ul style="list-style-type: none">· Operating Systems, Distributed Computing, Parallel Architectures, Object-oriented Programming.· Supervised five BSc/MSc students on their BSc Thesis on Distributed and Networking systems.	

EDUCATION

University of Edinburgh, UK <i>PhD in Informatics (ICSA): Distributed systems, systems security, replication protocols</i>	Sept 2019 - present
<ul style="list-style-type: none">· Sponsors: Microsoft Research, UK Rise, Advisor: Pramod Bhatotia· Design of robust distributed data management systems leveraging trusted hardware and byte-addressable storage.	
University of Edinburgh, UK <i>MSc in Computer Science: Software engineering, computer systems & high-performance computing</i>	Sept 2018 - Aug 2019
<ul style="list-style-type: none">· Thesis: <i>Rollback-Resilient Transaction Protocols using Trusted Counters</i> (Best Performing Female MSc Student Award)	
National Technical University of Athens (NTUA), Greece <i>Diploma (5-year joint degree, BEng and MEng) in Electrical & Computer Engineering</i>	Sept 2012 - Feb 2018
<ul style="list-style-type: none">· Thesis: <i>Improving QoS in modern multi-core servers with Dynamic Cache Partitioning</i>	

PUBLICATIONS

Anchor: Secure Persistent Memory Architecture , SIGMOD’24 Dimitris Stravakakis, Dimitra Giantsidi, Maurice Bailleu, Philip Saendig, Shady Issa, Pramod Bhatotia.
FlexLog: A Shared Log for Stateful Serverless Computing , ACM HPDC’23 Dimitra Giantsidi, Emmanouil Giortamis, Nathaniel Tornow, Florin Dinu, Pramod Bhatotia.
Treaty: Secure Distributed Transactions , IEEE/IFIP DSN’22 (Best paper nominee) Dimitra Giantsidi, Maurice Bailleu, Natacha Crooks, Pramod Bhatotia.
Avocado: A Secure In-Memory Distributed Storage System , USENIX ATC’21 Maurice Bailleu, Dimitra Giantsidi, Vasilis Gavrielatos, Le Quoc Do, Vijay Nagarajan, Pramod Bhatotia.
DICER: Diligent Cache Partitioning for Efficient Workload Consolidation , ICPP’21 Konstantinos Nikas, Nikela Papadopoulou, Dimitra Giantsidi, Vasileios Karakostas, Georgios I Goumas, Nectarios Koziris.

TECHNICAL SKILLS

Programming Languages	C/C++, Python, Bash, Golang, Java, Vitis HLS
Systems Programming	RocksDB and folly libraries, TEEs (Intel SGX, OpenEnclave SDK, AMD-sev), direct network I/O (DPDK, RDMA,Alveo SmartNICs), SPDK, Intel RDT, LLVM, collectd, POSIX/Unix, OpenMP and MPI, gRPC
Virtualization	KVM, Qemu/Libvirt, Docker, Kubernetes
Version Control	Git
Distributed Programming	Hadoop MapReduce, Socket and RPC programming

HONORS AND AWARDS

Research Grant , BaCaTec	2021
PhD scholarship , Microsoft Research	2019
Claire Jones Prize , Adelard Prize for Best Performing Female MSc Student at the University of Edinburgh	2019
Highest Honors award Top 0.1% in national qualification exams, GPA: 19.6/20	2012