DIMITRA GIANTSIDI

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Informatics Forum 1.05, University of Edinburgh

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RESEARCH INTERESTS

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 infrastuctures (byte addressable storage, gRPC/TCP). I am currently designing a trusted NIC architecture for large-scale distributed systems based on SmartNICs.

EDUCATION

PhD in Computer Science · Sept 2019 - present
University of Edinburgh, UK
· Sponsors: Microsoft Research, UK Rise, Advisor: Prof. Dr. Pramod Bhatotia
· Distributed systems, systems security, replication protocols

MSc in Computer Science · Sept 2018 - Aug 2019
University of Edinburgh, UK
· Best Performing Female MSc Thesis Award

MEng in Computer and Electrical Engineering · Sept 2012 - Feb 2018
National Technical University of Athens (NTUA), Greece

EMPLOYMENT

Microsoft Research, Cambridge, UK · Sept 2021 - Dec 2021
Research Scientist Intern
· Design of KVs for timing-attacks.

University of Edinburgh, UK · June 2023 - present
Research Assistant
· Hardware/software co-design of a trusted NIC architecture.

Intracom Telecom, Athens, Greece · Jul 2017 - Jul 2018
Software & Systems Engineer
· Performance and energy optimization of NFV services.

Unversity of Edinburgh, UK and TUM, Germany · Sept 2019 - present
Thesis advisor and Teaching Assistant
· Operating Systems, Distributed Computing, Parallel Architectures, Object-oriented Programming.
· Supervised five BSc/MSc students on their BSc Thesis on Distributed and Networking systems.

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'19**
Konstantinos Nikas, Nikela Papadopoulou, Dimitra Giantsidi, Vasileios Karakostas, Georgios 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

PhD scolarship, Microsoft Research 2019

Research Grant, BaCaTec 2021

Claire Jones Prize, Adelard 2019
Prize for Best Performing Female MSc Student at the University of Edinburgh

Highest Honors award 2012
Top 0.1% in national qualification exams, GPA: 19.6/20