DIMITRA GIANTSIDI

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Informatics Forum 1.05, University of Edinburgh

10 Crichton Street, EH8 9AB, Edinburgh, United Kingdom

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.
Dimitris Stravakakis, Dimitra Giantsidi, Maurice Bailleu, Philip Saendig, Shady Issa, Pramod Bhatotia.
SIGMOD'24

FlexLog: A Shared Log for Stateful Serverless Computing.
Dimitra Giantsidi, Emmanouil Giortamis, Nathaniel Tornow, Florin Dinu, Pramod Bhatotia.
ACM HPDC'23

Treaty: Secure Distributed Transactions.
Dimitra Giantsidi, Maurice Bailleu, Natacha Crooks, Pramod Bhatotia.
IEEE/IFIP DSN'22 (Best paper nominee)

Avocado: A Secure In-Memory Distributed Storage System.
Maurice Bailleu, Dimitra Giantsidi, Vasilis Gavrielatos, Le Quoc Do, Vijay Nagarajan, Pramod Bhatotia.
USENIX ATC'21

DICER: Diligent Cache Partitioning for Efficient Workload Consolidation.
Konstantinos Nikas, Nikela Papadopoulou, Dimitra Giantsidi, Vasileios Karakostas, Georgios Goumas, Nectarios Koziris.
ICPP'19

TALKS

ACM HPDC'23, Orlando, US
FlexLog: A Shared Log for Stateful Serverless Computing.

IEEE/IFIP DSN'22, Baltimore, US
Treaty: Secure Distributed Transactions.

Third Annual SGX Community Day 2022 (virtual)

USENIX ATC'21 (virtual) Avocado: A Secure In-Memory Distributed Storage System.

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

PROFESSIONAL EXPERIENCE

EuroSys'21
Web chair.

EuroSys'23, **SoCC'23**, **WWW'22**
Shadow PC member.

HONORS AND AWARDS

Microsoft Research Award	2019
Best Performing Female MSc Student Award, University of Edinburgh	2019
Highest Honors award	2012