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DimitrisMouris

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Computer Security researcher motivated by the impact of cybersecurity in contemporary society and in humanity.

Experience

University of Delaware — Research Assistant — February 2019 – Now
- Private computation
- Privacy-preserving algorithms
- Zero-knowledge proofs
- Side & covert channels attacks

Athena Research & Innovation Center — Research Assistant & Software Engineer — September 2017 – December 2018
My Health My Data (MHMD): Developed an end-to-end framework enabling privacy-preserving medical data analytics using secure multi-party computation. The framework was developed using Python, NodeJS, JavaScript & HTML, while the privacy-preserving algorithms in SecreC (C-like language). *smpc-analytics*

Education

Doctor of Philosophy (PhD) in Electrical and Computer Engineering — February 2019 – Now
Department of Electrical & Computer Engineering, University of Delaware, DE — GPA 3.9/4
Research Topic: *Private and trustworthy computation* — Advisor: Nektarios G. Tsoutsos
My research focuses on enabling practical and efficient deployment of *zero-knowledge proofs* for any application.

Master of Science (MSc) in Computer Science — October 2016 – September 2018
Department of Informatics & Telecommunications, University of Athens, Greece — GPA 9.73/10
The *Computer Systems (Software and Hardware)* specialization covers advanced topics in areas such as computer security & architecture, operating & distributed systems, programming languages, algorithms & data structures.

Bachelor of Science (BSc) in Computer Science — October 2012 – September 2016
Department of Informatics & Telecommunications, University of Athens, Greece — GPA 8.1/10

Selected Publications | Research

Pythia: Intellectual Property Verification in Zero-Knowledge
57th ACM/ESDA/IEEE Design Automation Conference (DAC), 2020
D. Mouris & N.G. Tsoutsos

Zilch: A Framework for Deploying Transparent Zero-Knowledge Proofs
Cryptology ePrint Archive, Report 2020/1155, In peer review IEEE TIFS
D. Mouris & N.G. Tsoutsos

TERMinator Suite: Benchmarking Privacy-Preserving Architectures
IEEE Computer Architecture Letters, 2018
D. Mouris, N.G. Tsoutsos & M. Maniatakos

Privacy Preserving Medical Data Analytics using Secure Multi-Party Computation. An End-To-End Use Case.
M. Sc. thesis for the University of Athens, 2018
A. Giannopoulos & D. Mouris (listed alphabetically)
Supervisors: Y. Ioannidis, M. Garofalakis

Technical Skills

Programming Paradigms
Procedural, Object Oriented, Logic

Programming Languages
C, C++, Java, Python, Prolog

Parallel Programming
POSIX processes & threads, MPI, Open MP

Assembly Languages
x86/x64, MIPS

Markup & Web Languages
NodeJS, JS, HTML

Scripting
Z shell, Bash

Database Systems
SQL, MySQL

Version Control
Git, Mercurial

Computer Graphics
LaTeX, OpenGL

Teaching Assistance

University of Delaware

Microprocessor Systems	Fall 2020
Applied Cryptography	Spring 2020
Secure Software Design	Spring 2020
Embedded Sys. Security	Fall 2019 – 20

University of Athens

System Programming	Spring 2017
Logic Programming	Spring 2017
Introd. to Programming	Fall 2014 – 17
Operating Systems	Fall 2016

Selected Open-Source Projects

liboqs-java: Java wrapper for liboqs
Open Quantum Safe (OQS) Project, 2020

QR Secret Sharing, 2018

Volunteering

CSAW ESC 2020 Global Co-lead
Challenge developer for research-oriented embedded systems hacking.

CTF Mentoring
Binary exploitation and reverse engineering mentoring for the University of Delaware's undergraduate *Blue Hens* team.

Languages

Greek (native), English (fluent)