Dimitris Mouris

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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

Teaching Assistance

University of Delaware
Microprocessor Systems Fall 2020
Applied Cryptography Spring 2020
Secure Software Design Spring 2020
Embedded Systems Security Fall 2019

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)

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 ☰