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# Dimitris Mouris

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DoB: 11th August 1994

https://jimouris.github.io

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

## Experience

Athena Research & Innovation Center Research Assistant & Software Engineer September 2017 – December 2018 My Health My Data (MHMD): A Horizon 2020 project developing a blockchain-based health data platform enabling privacy-preserving consented data sharing and big data analytics, using techniques like Secure Multi-party Computation, Differential Privacy, K-Anonymity and Smart Contracts. MHMD stems from the urgency of securing patient data, reducing "by design" the risk of identity theft and privacy breaches, and introducing a new way to share private information empowering their primary owners, the patients.

#### Education

#### Doctor of Philosophy (PhD) in Electrical and Computer Engineering

February 2019 - Now

Department of Electrical & Computer Engineering, University of Delaware, DE

Research Topic: Private and trustworthy computation

Advisor: Nektarios Tsoutsos My research focuses on developing a novel framework for creating zero-knowledge proofs (ZKPs) for any application. Our framework consists of two main components a front-end and a back-end. The front-end supports our novel, high-

level programming language (called Zilch) and our custom compiler for translating the Zilch code to zMIPS assembly instructions; zMIPS is our extension to the MIPS ISA to support programming ZKPs. The back-end translates the zMIPS assembly instructions to arithmetic circuits and generates ZKPs for verifying the evaluation of these circuits.

## 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 treats topics that relate to system-level computation. This includes knowledge areas such as Computer Architecture, Operating & Distributed Systems, Programming Language Implementation, and more.

#### Bachelor of Science (BSc) in Computer Science

October 2012 – September 2016

Department of Informatics & Telecommunications, University of Athens, Greece

GPA 8.1/10

## Publications | Research

## 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  $\equiv$ , Object Oriented  $\equiv$ ,  $Logic \equiv$ , Functional  $\equiv$ 

## **Programming Languages**

 $C \equiv , C++ \equiv , Java \equiv , Python \equiv , Prolog \equiv ,$ Datalog  $\equiv$ , Haskell  $\equiv$ 

#### Parallel Programming

POSIX processes & threads  $\equiv$ , MPI  $\equiv$ , Open MP  $\equiv$ , NVidia CUDA  $\equiv$ 

## **Database Systems & Blockchain Frameworks**

 $SQL \equiv$ ,  $MySQL \equiv$ ,  $Hyperledger Fabric <math>\equiv$ 

## Teaching Assistance

Introduction to Programming Fall 2014/15/16/17 **Operating Systems** Fall 2016 Spring 2017 System Programming Logic Programming Spring 2017

#### Languages

**Greek** (native) English (fluent)

## Scripting

 $Z \text{ shell} \equiv$ ,  $Bash \equiv$ ,  $C \text{ shell} \equiv$ 

#### Markup & Web Languages

NodeJS  $\equiv$  , JavaScript  $\equiv$  , PHP  $\equiv$  , HTML  $\equiv$  , CSS  $\equiv$ 

#### **Assembly Languages**

MIPS  $\equiv$ , Cryptoleq  $\equiv$ , x86/x64  $\equiv$ 

#### **Computer Graphics**

OpenGL≡, LAT<sub>F</sub>X ≡

## **Version Control**

 $Git \equiv . Mercurial \equiv$