Ioannis Alexopoulos

Curriculum Vitae

Education

2017–2023 **Diploma (5-year degree - 300 ECTS - MEng equivalent)**, *School of Electrical and Computer Engineering*, National Technical University of Athens (Greece), Grade: *9.39/10.00* .

Experience

Academic

2022 –present **Member of the crypto group**, *NTUA*, Athens, Greece.
Attended several presentations on cryptography related topics.

2022–2023 **Scientific Intern at ISTA**.
Participated in a research project with the SPiDerS group under the supervision of Assistant Professor Lefteris Kokoris Kogias on the topic of blockchain scalability

Miscellaneous

2019–2020 **Personal Tutor**.
Tutored high-school students on the subjects of mathematics, physics, chemistry.

Awards and Achievements

- [2017] Eurobank EFG Award for achieving the highest grade ($19\,647/20\,000$) in the PanHellenic Examinations among the students of my high-school.
- [2017] "Agoniston Polytechniou Noemvriou 1973" Award for achieving the highest grade in the PanHellenic Examinations among the students entering the School of Electrical and Computer Engineering of the National Technical University of Athens.

Languages

Greek	**Excellent**	*Native Speaker*
English	**Excellent**	*Cambridge Proficiency*
German	**Intermediate**	*Goethe-Zertifikat B2*

Programming Skills

Imperative	**Very good**	*C/C++, Rust, Python, Java, Assembly (80x85/86, AVR, RISC-V)*
Functional	**Good**	*ML*
Database	**Good**	*SQL*

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Parallel	**Good**	*MPI, OpenMP, CUDA, Posix Threads*
Logic	**Intermediate**	*Prolog*

Operating Systems Skills

Unix/Linux	**Very good**
Microsoft Windows	**Good**

Computer Networking Skills

TCP/IP protocol suite	**Very Good**
Routing protocols (RIP, OSPF, BGP)	**Very good**
Network protocol analyzer (Wireshark)	**Very Good**

Diploma Thesis

- **"Parallel Smart Contract Execution with Contention Awareness"**
  In this thesis, we introduced a parallel-execution engine for smart contracts that combines a novel architectural model called *Loose Coupling* which mitigates most existing attack vectors and a context-aware execution engine that operates efficiently under highly contended workloads.
  Supervisors: Lefteris Kokoris Kogias, Aris Pagourtzis
  Source: http://artemis.cslab.ece.ntua.gr:8080/jspui/handle/123456789/18928

Selected projects conducted during undergratuate studies

- Parallelization of Jacobi method for differential equation solving, in various architectures (Course: Parallel Processing Systems, Implementation: MPI, OpenMP, CUDA)
- Noobcash: Proof–of–work blockchain system implementation (Course: Distributed Systems, Implementation: Python)
- Use of Apache Spark in Database Systems (Course: Advanced Topics in Database Systems, Implementation: RDD API, Spark SQL)
- Implementation of a Linux kernel driver for a wireless sensor network (Course: Operating Systems Laboratory, Implementation: Linux Kernel module in C)