

Chloe Alverti

PhD Student in Computer Science, National Technical University of Athens

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📍 Greece

🌐 <https://chloe-alverti.github.io/>

🐙 chloe-alverti



EDUCATION

Ph.D. in Computer Science

Computing Systems Laboratory, ECE NTUA

📅 Sept. 2017 – present

Advisors: Prof. G.Goumas, Prof. V.Karakostas

BSc. & MEng. in ECE

National Technical University of Athens

📅 Oct. 2007 – June 2014

Advisor: Prof. N.Koziris

EXPERIENCE

PhD Researcher

National Technical University of Athens – NTUA

📅 Aug. 2017 – Present

- My research is broadly focused on computer architecture and operating systems, focusing on emerging memory/storage technologies, hardware-software co-design and virtualization.
- On the operating system side, I have solid background in a) memory management and memory virtualization and b) in file systems designed for persistent memory storage technologies. On the computer architecture side, I have studied hardware designs for a) address translation and b) main memory data compression.

Research Intern

University of Wisconsin Madison (UWM)

📅 Sept 2019 – Dec. 2019

- Worked on efficient OS support for persistent memory (as storage technology).
- Hosted by prof. Michael Swift.
- Funded by HiPEAC Collaboration Grant (peer-reviewed).

System Software Engineer

ZeroPoint Technologies AB

📅 March 2016 – June 2017

- Start-up company developing memory compression technology in Gothenburg, Sweden. I worked on the design of the system software support that is required to exploit compressed memory's increased and elastic capacity.

Research Assistant

Chalmers University of Technology, Gothenburg, Sweden

📅 Sept. 2014 – Aug. 2016

- Worked for the FP7 EU project EuroServer. Project's objective: the design of power efficient next generation "Micro-Servers" to be used in building datacenters. Area of personal research activity: system software support for novel main-memory compression technology.
- Supervised by prof. Per Stenstrom.

SKILLS

Programming: C / C++ Python Bash

Misc: OpenMP \LaTeX git

Languages: English •Greek (native) •French (elementary)

PUBLICATIONS

📄 Peer-Reviewed

- Chloe, Alverti, Vasileios Karakostas, et al. (2022). "DaxVM: Stressing the Limits of Memory as a File Interface". In: *MI-CRO55: The 55th IEEE/ACM International Symposium on Microarchitecture (to be presented in Chicago, October 2022)*.
- Christos Katsakioris, Alverti Chloe et al. (2022). "FaaS in the age of (sub-)μs I/O: a performance analysis of snapshotting". In: *SYSTOR '22: The 15th ACM International Systems and Storage Conference, Haifa, Israel, June 13 - 15, 2022*. ACM. DOI: 10.1145/3534056.3534938.
- Chloe, Alverti, Stratos Psomadakis, et al. (2020). "Enhancing and Exploiting Contiguity for Fast Memory Virtualization". In: *2020 ACM/IEEE 47th Annual International Symposium on Computer Architecture (ISCA)*. DOI: 10.1109/ISCA45697.2020.00050.
- Panagiotis, Mpakos et al. (2019). "On the Performance and Energy Efficiency of Sparse Matrix-Vector Multiplication on FPGAs". In: *PARCO*. DOI: 10.3233/APC200092.
- Chloe, Alverti, Goumas Georgios, et al. (2015). "Memory link compression to speedup scientific workloads". In: *Eighth Workshop on Programmability Issues for Heterogeneous Multi-cores (MULTIPROG-2015)*.

PATENTS

📄 Published Patent Applications

- Chloe, Alverti, Arelakis Angelos, et al. (2020). "Managing free space in a compressed memory system". ZeroPoint Technologies AB. URL: <https://patents.google.com/patent/WO2020101562A1/>.

AWARDS



HiPEAC paper award 2020

Publication "Enhancing and exploiting contiguity for fast memory virtualization"



PACT ACM Student Research Competition 2018 (1st)

Poster "Towards Speculative Based Address Translation"

TEACHING

- **Fall 2017-present:** Computer Architecture, ECE, NTUA (5th semester) – (TA)
- **Fall 2017-present:** Operating Systems, ECE, NTUA (6th semester) – (TA)
- **Spring 2018-present:** Advanced Computer Architecture, ECE, NTUA (8th semester) – (TA)
- **Spring 2018-present:** Operating Systems Lab, ECE, NTUA (7th semester) – (TA)

TRAINING PROGRAMS

- ACACES 2015, HiPEAC Summer School, July 12-18 2015, Fiuggi, Italy.

REFERENCES

Prof. Georgios Goumas – goumas@cslab.ece.ntua.gr

@ National Technical University of Athens, CSLab (advisor)

Prof. Vasileios Karakostas – vkarakos@di.uoa.gr

@ University of Athens

Prof. Michael Swift – swift@cs.wisc.edu

@ University of Wisconsin Madison, Computer Science

Dr. Jayneel Gandhi – jayneel@cs.wisc.edu

@ META, Palo Alto

Prof. Per Stenstrom – per.stenstrom@chalmers.se

@ Chalmers University of Technology, Sweden

Dr. Angelos Arelakis – angelos.arelakis@zptcorp.com

@ ZeroPoint Technologies AB, Sweden

Prof. Dionisios Pnevmatikatos – pnevmati@cslab.ece.ntua.gr

@ National Technical University of Athens

Prof. Nectarios Koziris – nkoziris@cslab.ece.ntua.gr

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