

George Z. Zachos

M.Eng. Student in Computer Science & Engineering

General Information

Military Duty:
Not Served
Family status:
Single

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LinkedIn
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Education

2013-Present **M.Eng. in Computer Science and Engineering** University of Ioannina
Master of Engineering program at the Computer Science & Engineering
Department (CSED), School of Engineering, University of Ioannina (UOI).

Language Skills

Greek Native Language

English Excellent Knowledge C2
Certified by: University of Michigan (November 2010)

Work Experience

10/2013-02/2016 **Computer and Network Technician** CSED, University of Ioannina
The Computer Systems Support Group provides assistant work in the
management of departmental computing resources, develops software
applications for departmental use & aids in the operation of educational
computer laboratories.

Research Groups

02/2015-Present **Parallel Processing Group (PPG)** CSED, University of Ioannina
PPG's main research interests lie in the area of parallel and distributed
systems. For more information visit: paragroup.cse.uoi.gr

Projects

09/2017-08/2018 **PRACE-5IP** Greek Research & Technology Network (GRNET)
I participated as a parallel programming instructor in the first year of op-
eration of the Partnership for Advanced Computing in Europe (PRACE)
Training Centre (PTC) established by GRNET.

Teaching Assistance

2017-2019 **Systems Programming (core undergraduate)** CSED, University of Ioannina
The C programming language and POSIX systems programming using C.
Semesters: Fall 2016, 2017, 2018, 2019

Programming Skills

- General-purpose programming: C, Java SE, Python
- Shells: Bash, Bourne Shell
- Parallel programming: POSIX threads, OpenMP, MPI
- Systems programming: Linux, Unix
- GPIO library: WiringPi (for Raspberry Pi)
- Scientific computing: GNU Octave
- Other tools: Portable Hardware Locality (hwloc)

I am also familiar with MIPS Assembly, C++, Haskell, OpenGL, Unity3d and HTML5.

Computing Skills

- Android application black box testing: Simple Password Vault Application
- Backup Tool: Attic
- Databases: Round Robin Database (*RRDtool*)
- Hypervisors: VMware ESXi, VMware Workstation, VirtualBox
- Operating Systems: GNU/Linux (*Debian-based distributions*)
- Server Administration: Debian ≥ 8 , Ubuntu 14.04, VMware vSphere 6, Raspbian
- Single Board Computer: Raspberry Pi
- Version Control System: Git, Gitolite (Git Repository Hosting)

Software Projects

- 02/2018-Present **MARS Stack Visualizer** CSED, University of Ioannina
A tool for MIPS Assembler and Runtime Simulator (MARS) that allows real time visualization of stack segment modification operations.
- 06/2016-Present **OMPI compiler** Parallel Processing Group, CSED, UOI
An open source OpenMP compiler and runtime system for C.
A major contribution of mine was the implementation of hardware topology detection and of thread affinity policies according to the OpenMP specifications. For more information visit: cse.uoi.gr/~ompi
- 16-20/04/2016 **Implementation of FSS policy in MINIX** CSED, University of Ioannina
During the Operating Systems course, I extended the system kernel of MINIX 3.2.0 to support the fair-share scheduling (FSS) policy.
- 01/2015-02/2016 **Aeolus Logger** Computer Systems Support Group, CSED, UOI
This project is about the implementation of a logging system and it's integration with Emerson cooling units, so that it can be used to monitor the environmental conditions of the cluster room in CSE Department.

Repositories

- **Backup-script** [*BASH*] - <https://gzachos.com/backup-script>
 - A shell script that backs up the directories specified in the configuration section and manages old backup files.
- **Door-monitor** [*C*] - <https://gzachos.com/door-monitor>
 - Door status monitoring and email notification system using Raspberry Pi.
- **Airtemp-lcd** [*C*] - <https://gzachos.com/airtemp-lcd>
 - Display air temperature retrieved by a DS18B20 sensor in an HD44780 LCD using Raspberry Pi.
- **Ai-course-uoι** [*C*] - <https://gzachos.com/ai-course-uoι>
 - A-star, Uniform Cost Search (UCS) and Minimax algorithm implementation.
- **Rpi-cputemp** [*BASH*] - <https://gzachos.com/rpi-cputemp>
 - Tutorial on monitoring CPU temperature of Raspberry Pi via web interface; data logging and plotting using RRDtool.
- **Cgis-course-uoι** [*C++*] - <https://gzachos.com/cgis-course-uoι>
 - OpenGL application for polygon drawing, coloring, clipping and 3D extrusion.
- **Nla-course-uoι** [*C, Octave*] - <https://gzachos.com/nla-course-uoι>
 - Implementation of the Cholesky decomposition, Steepest Descent and Conjugate Gradients methods for solving linear systems.
- **Compilers-course-uoι** [*Python*] - <https://gzachos.com/compilers-course-uoι>
 - A compiler implementation for a minimal programming language that has borrowed its characteristics from C and Pascal, targeting the MIPS32 ISA.

Honors and Awards

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|------------|--|---|
| 21/10/2016 | Recognition Award | CSED, University of Ioannina |
| | The Dean of the Department of Computer Science and Engineering awarded me for my contribution to the Computer Systems Support Group. | |
| 19/11/2015 | Contribution Award | Greek Free and Open Source Software Society |
| | Awarded for the localization of Elgg social networking engine. | |

Organizations

6/2014-Present Greek Free and Open Source Software Society (GFOSS)

9/2014-Present Institute of Electrical and Electronics Engineers (IEEE)