George Z. Zachos

M.Eng. Student in Computer Science & Engineering

General Information

Military Duty:
Not Served
Family status:
Single

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Social Links

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 operation of the **Partnership for Advanced Computing in Europe (PRACE) Training Centre (PTC)** established by *GRNET*.

Teaching Assistance

| 2016-2019 | 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 $\geq$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 backups 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-uoi [*C*] - https://gzachos.com/ai-course-uoi

  – 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-uoi [*C++*] - https://gzachos.com/cgis-course-uoi

  – OpenGL application for polygon drawing, coloring, clipping and 3D extrusion.

- Nla-course-uoi [*C, Octave*] - https://gzachos.com/nla-course-uoi

  – Implementation of the Cholesky decomposition, Steepest Descent and Conjugate Gradients methods for solving linear systems.

- Compilers-course-uoi [*Python*] - https://gzachos.com/compilers-course-uoi

  – A compiler implementation for a minimal programming language that has borrowed its characteristics from C and Pascal, targeting the MIPS32 ISA.

Honors and Awards

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
Awared 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)**