
ZACHARENIA GAROFALAKI

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Date of birth: 12/04/1976 | Nationality: Greek

WORK EXPERIENCE - TEACHING FELLOW

Dep. of Informatics and Computer Engineering
University of West Attica
<http://www.ice.uniwa.gr>

Mar 2018 – date

Courses I involve in:

- Computer Networks I and II
- Network and Communications Security
- Databases and Advanced Databases
- Software Defined Networks
- Internet of Things
- Advanced Network Technologies
- Theses co-supervision

Dep. of Electronic Computer Systems Engineering
Piraeus University of Applied Sciences
<http://www.mhys.puas.gr>

Aug 2017 – Feb 2018

Courses I was involved in:

- Computer Networks
- Security & Management of Computer Systems
- Theses co-supervision

WORK EXPERIENCE - TEACHING ASSOCIATE

Dep. of Electronic Computer Systems Engineering
Piraeus University of Applied Sciences
<http://www.mhys.puas.gr>

Feb 2014 – Aug 2017

Courses I was involved in:

- Computer Networks
- Networks Security
- Open-Source OSes – Android (postgraduate)
- Open-Source Software/Hardware Applications (postgraduate)

Dep. of Electronic Computer Systems Engineering
Technological Educational Institute (TEI) of Piraeus
<http://www.teipir.gr>

Sep 2001 – Aug 2011

Courses I was involved in:

- Computer Peripheral Units
- Computer Networks
- Networks Security
- Databases – SQL Language

WORK EXPERIENCE - IT SYSTEMS & NETWORK ENGINEER

Faculty of IT department, Network Operation Centre (NOC)
Technological Educational Institute (TEI) of Piraeus
<http://noc.teipir.gr>

May 1998 – Jan 2016

Within the University's Network Operation Centre (NOC), I worked as a Systems and Network Specialist for 18 years. My main tasks where:

- Technical support of all the members of the academic community
- Installation, maintenance, configuration, support and optimization of all IT assets (servers and workstations, network devices, software and communication links)
- Reviewing, optimising and rebuilding the university's network infrastructure
- Setup, configuration and optimization of audio/video broadcasting solutions (infrastructure and software)
- Development and support of basic and advanced network services (e.g. http, ftp, smtp/pop3, DNS, VPN, Mailing lists, Dial up, etc.)
- Setup of Network Monitoring capabilities/infrastructure through the installation and configuration of widely used commercial & Open-Source solutions (e.g. HP OpenView, Spectrum VLAN Manager, custom Perl/PHP/shell scripts, SNMP, etc.)
- Installation, configuration, administration and monitoring of Servers (i.e. DB platforms such as Oracle and MySQL, File Servers, Web/Application Servers, Mail Server, etc.)
- Development of customized Dashboards (i.e. dynamic web-pages) to ease and automate the Servers administration and reporting process
- Creation and administration of user accounts, profiles, file sharing, access privileges and security
- Help Desk (1st, 2nd, 3rd Level) through analysis, investigation and troubleshooting of problems in order to meet the SLAs
- Creation of documentation both technical (e.g. network maps, configuration guides, etc.) and for the end-user (e.g. "how to", Help-guide, acceptable use policy, etc.)
- Liaise with the supervisors with periodical or on-demand reporting, clearly communicating the status on current initiatives, on problems as well as resolutions
- Research and evaluation of new technologies, proposing process improvements for existing procedures
- Coordination and consulting with vendors for hardware/software purchases, product services and support

WORK EXPERIENCE - OTHER

Technical & Administrative Staff
Dep. of Electronic Computer Systems Engineering
Piraeus University of Applied Sciences
<http://www.mhys.puas.gr>

Feb 2016 – Aug 2018

I was a member of the Technical and Administrative Staff of the Dep. of Computer Engineering. The following list contains the position's main tasks and activities:

- Server system design, operation and maintenance
- Network design, management and maintenance
- Laboratory equipment administration and support
- Organization and planning of laboratory courses

Teaching Professional, Self-employed

Oct 2001 - date

My teaching and classes-management skills, combined with a deep knowledge of IT topics, allowed me to also work for external Private Schools, as an ECDL (European Computer Drive Licence) qualified independent teacher, over the past 20 years.

Doctorate researcher & PhD candidate

Jun 2016 – date

University of Piraeus

<http://www.cs.unipi.gr>

- Research Field: Quality of Service-Oriented Architecture and Security in Internet of Things (IoT) Ecosystem
 - R&D projects implementation
 - Teaching assistance
 - Theses co-supervision
- EQF level 8

MSc on Applied Information Systems

Feb 2014 – Sep 2015

Piraeus University of Applied Sciences

<http://www.mhys.puas.gr>

Advanced Topics of Object-Oriented Programming, Open Software Android, Industrial Informatics, VHDL and Advanced Logic Design, Broadband Networks, Secure Technologies of e-Commerce, Integrated Industrial Control, Applications of Open Software/Hardware, Design of Mechatronic and Embedded Systems, Advanced Network Management

- Thesis: "Remote monitoring network behaviour and power control of a network device - AGER"
- EQF level 7

BSc on Electronic-Computing Systems (ECS)

Feb 1996 – Jul 2000

Technological Educational Institute (TEI) of Piraeus

<http://www.teipir.gr>

- Thesis: "Computerized Secretarial for ECS Department", development of an application for administrating students and faculty data"
- EQF level 6

Next-Generation Enterprise Modelling in the Age of Internet of Things (NEMO)

Jul 2017

University of Vienna, Austria

I successfully graduated from the Erasmus+ International Summer School, a program combining lectures and practical work on the design and implementation of Enterprise Digital Twins and Ecosystems based on conceptual modelling methods.

- Graduating presentation: "From Model-Based to Model-Integrating Software"
- ECTS 4

CCNA Exploration

May 2013

Cisco Networking Academy

Network Fundamentals - Routing Protocols and Concepts - LAN Switching and Wireless - WAN Technologies Competencies

Routing and Switching – Secure networks

Apr 2007

Enterasys Secure Networks

Technical Seminar on installing, configuring and administrating Enterasys Routing and Switching systems.

P U B L I C A T I O N S

- Z. Garofalaki, D. Kosmanos, S. Moschoyiannis, D. Kallergis and C. Douligeris. (2022). Electric Vehicle Charging: A Survey on the Security Issues and Challenges of the Open Charge Point Protocol (OCPP). In *IEEE Communications Surveys & Tutorials*, vol. 24, no. 3, pp. 1504-1533, doi: 10.1109/COMST.2022.3184448.
- Garofalaki, Z., Kallergis, D., Douligeris, C. (2022). A Security Assessment Platform for Stochastic Petri Net (SPN) Modelling in the Internet of Things (IoT) Ecosystem. In: Karagiannis, D., Lee, M., Hinkelmann, K., Utz, W. (eds) *Domain-Specific Conceptual Modeling*. Springer, Cham. https://doi.org/10.1007/978-3-030-93547-4_13
- Kallergis, D., Garofalaki, Z., Katsikogiannis, G., Douligeris, C. (2020). CAPODAZ: A Containerised Authorisation and Policy-driven Architecture using Microservices. *Ad Hoc Networks*, (104), pp.102-153. <https://doi.org/10.1016/j.adhoc.2020.102153>
- Katsikogiannis, G., Kallergis, D., Garofalaki, Z., Mitropoulos, S. and Douligeris, C. (2018). A Policy-aware Service Oriented Architecture for Secure Machine-to-Machine Communications. *Ad Hoc Networks*, (80), pp.70-80. <https://doi.org/10.1016/j.adhoc.2018.06.003>
- Garofalaki Z., Amorginos J., Ellinas J. (2015). Object Motion Tracking Based on Colour Detection for Android Devices. *World Academy of Science, Engineering and Technology Journal*, 9(4), pp.999-1002.
- European Union Agency for Network and Information Security (ENISA). (2021). *ENISA Threat Landscape Report 2021*. <http://dx.doi.org/10.2824/324797>
- European Union Agency for Network and Information Security (ENISA). (2020). *ENISA Threat Landscape Report 2020*. <http://dx.doi.org/10.2824/552242>
- European Union Agency for Network and Information Security (ENISA). (2019). *ENISA Threat Landscape Report 2018*. <http://dx.doi.org/10.2824/622757>
- European Union Agency for Network and Information Security (ENISA). (2017). Ad-hoc & sensor networking for M2M Communications Threat Landscape and Good Practice Guide. <http://dx.doi.org/10.2824/58281>

C O N F E R E N C E P A P E R S

- Karvounidis, T., Kallergis, D., Garofalaki, Z. and Douligeris C. (2022). *A Methodology for Adopting Security Management Principles in Health Sector Environments*. In 25th Pan-Hellenic Conference on Informatics (PCI 2021), 26-28 Nov, Volos, Greece, pp. 495-499.
- Garofalaki, Z. and Kallergis, D. (2019). *On the Security of an IoT-based Intelligent Transportation Service*. In 2019 4th South-East Europe Design Automation, Computer Engineering, Computer Networks and Social Media Conference (SEEDACECSM), 20-22 Sep, Piraeus, Greece, pp.1-5.
- Garofalaki, Z., Kallergis D. and C. Douligeris (2019). *Secure Fleet Management of an Intelligent Transportation Service in the IoT ecosystem*. In 3rd International Balkan Conference on Communications and Networking (BalkanCom2019), 10-12 Jun, Skopje, North Macedonia.
- Katsikogiannis, G., Garofalaki, Z., Kallergis, D. and Douligeris, C. (2018). *PDA: A Policy-driven for authorizations scheme with μ Services*. In 2 International Balkan Conference on Communications and Networking (BalkanCom2018), 6-8 Jun, Podgorica, Montenegro.
- Garofalaki, Z., Kallergis, D., Katsikogiannis, G., Ellinas, I. and Douligeris, C. (2017). *A DSS model for IoT-based intelligent transportation systems*. In 2017 IEEE International Symposium on Signal Processing and Information Technology (ISSPIT2017), 18-20 Dec, Bilbao, Spain, pp.276-281.
- Garofalaki Z., Kallergis D., Katsikogiannis G. and Douligeris C. (2017). *A Policy-Aware Model for Intelligent Transportation Systems*. In 1st International Balkan Conference on Communications and Networking (BalkanCom2017), May 30-June 2, Tirana, Albania. arXiv preprint arXiv:1706.04803
- Tamilias A., Themelis T., Karvounidis T., Garofalaki Z. and Kallergis D. (2017). *B@SE: Blocks for @rduino in the Students' Educational Process*. 8th IEEE Global Engineering Education Conference (EDUCON2017), 25-28 Apr, Athens, Greece. IEEE Conference Proceedings, pp.910-915.
- Garofalaki Z., Kallergis D., Katsikogiannis G., Ellinas I. and Douligeris C. (2016). *Transport services within the IoT ecosystem using localisation parameters*. 16th IEEE Symposium on Signal Processing and Information Technology (ISSPIT2016), 12-14 Dec, Limassol, Cyprus, pp.87-92.

R E S E A R C H P R O J E C T S

Intelligent triage system for hospital emergency departments and clinics Jun 2018 – Jun 2022

Funded by the Ministry of Economy & Development, Special Secretary for ERDF & CF, Managing Authority of EPAnEK Competitiveness Entrepreneurship Innovation operational program [Grant agreement No. T1EAK-02489]

ENISA Threat Landscape Report 2020 Jun 2020 – Sep 2021

Funded by European Union Agency for Network and Information Security (ENISA)

ENISA Threat Landscape Report 2019 Nov 2019 – Mar 2020

Funded by European Union Agency for Network and Information Security (ENISA)

ENISA Threat Landscape Report 2018 Jun 2018 – Nov 2018

Funded by European Union Agency for Network and Information Security (ENISA)

Ad-hoc and sensor networking for M2M communications Threat Landscape and Good Practice guide Jun 2016 – Nov 2016

Funded by European Union Agency for Network and Information Security (ENISA) [D-COD-16-T22]

Open-source learning platform and open courses Jan 2014 – Aug 2015

Cofunded by the European Social Fund and the greek Ministry of Education [MIS 380196]

P R E S E N T A T I O N S & I N V I T E D S P E E C H E S

- Garofalaki, Z., Kallergis, D. and Douligeris, C. (2022). *SAPnet: A Security Assessment Platform for SPN in the IoT Ecosystem*. Presentation in the 8th International Summer School NEMO: Next Generation Enterprise Modelling in the Age of Internet of Things, 11-22 Jul, University of Vienna, Austria.
- Garofalaki, Z., Kallergis, D. and Douligeris, C. (2019). *SAPnet: Security Assessment Platform for SPN in the IoT Ecosystem*. Presentation in the 6th International Summer School NEMO: Next Generation Enterprise Modelling in the Age of Internet of Things, 15-26 Jul, University of Vienna, Austria.
- Kallergis, D. and Garofalaki, Z. (2017). *Ad-hoc & Sensor Networking for M2M Communications: Threat Landscape and Good Practice Guide*. Invited speech in 9 Conference on Informatics in Education (CIE2017), 13-15 Oct, Athens, Greece.
- Garofalaki, Z., Šestak, P., Chen, K.L. and Kamagaté, Z. (2017). *From Model-Based to Model-Integrating Software*. Presentation in the 4th International Summer School NEMO: Next Generation Enterprise Modelling in the Age of Internet of Things, 17-28 Jul, University of Vienna, Austria.

L A N G U A G E S K I L L S

Greek (native), English (Independent user), French (Independent user), German (Basic user)