Paraskevi Piperaki

📍 Ano Asites, Heraklion, Crete

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Sex Female | Date of birth 06/06/1988 | Nationality greek

WORK EXPERIENCE

13/6/18- 11/1/19

Software Engineer, TEI of Crete

Working on EU-FP7 project DREAMS -- Distributed REal-Time Architecture for Mixed Criticality Systems (General Secretariat of Research & Technology) -- http://www.dreams-project.eu

Implemented a co-simulation platform which focuses on validating a full system, by performing near real-time, command-to-command co-simulation of the hardware DUT implemented on FPGA as a full system prototype against its equivalent cycle-approximate system-level model of the DUT. In addition, extended the network-on-chip firewall (designed in DREAMS) with admission control implemented at Linux driver level. The mechanism aims at testing and evaluating NoC Firewall behavior for different NoC FIFO sizes. For this reason, network statistics (i.e., packets passed, dropped due to firewall rules, or dropped due to limited buffers) are collected for read and write operations.

01/09/2016-28/02/17, 06/03/17-30/06/2017

Software Engineer, TEI of Crete

Working on EU-FP7 project DREAMS -- Distributed REal-Time Architecture for Mixed Criticality Systems (Grant No. 610640) -- http://www.dreams-project.eu

Designed a hierarchical driver based on a hardware NoC firewall with deny rules to implement on-chip memory protection and anonymity services that target an in-hospital eHealth application. Focused on all layers, and especially how mid-level driver layer can be extended to implement high-level system security primitives for supporting a) *data privacy and anonymity,* and b) *access control of on–chip BRAM memory from internal denial-of-service attacks.*

10/2017-06/2019

Teaching Assistant, TEI of Crete

Laboratory of Operating Systems

OS educational training, including bash/awk script language, memory management, processes and POSIX threads, scheduling and inter-process synchronization (semaphores, barriers, mutexes etc).

Laboratory of Data Structures

C language (data structures, stack, queue, lists, trees etc).

10/2016-06/2018

Teaching assistant, AKMI Educational Center

Department of Informatics Technology - Laboratory of Multimedia/Video Games

Utilized Adobe Flash player program to create classic shape and motion tween and dynamic flash buttons with animation and sound, Implemented flash game (shooting) via action script 3 language. Examined Adobe premiere and Adobe after effects programs and learned montaz methods (copy, cut, transitions effects), sound and image effects, 3D technology etc.

Department of Graphic Design

Used Adobe Dreamweaver to create a website via html, css and javascript code.

Department of Network and Telecommunication

Computer Networks II., Networks Security.

07/2015-10/2015

IT engineer, SYSTEMHOST company

Technical support for network and PCs

11/2012-04/2013

Practical training, ICS-Forth

Develop a professional website (Adobe dreamweaver)

EDUCATION AND TRAINING

2015 -2017

Msc in Informatics & Multimedia, TEI of Crete

Thesis: Security Primitives in a Hierarchical GNU/LINUX Driver of a Hardware NoC Firewall

Developed hierarchical GNU/Linux driver based on a hardware NoC firewall embedded in an FPGA board (ARMv7-based Zedboard), Implemented high level security visualization via system tools, such as Grace, HeatMap and Secure Event Correlation tool (SEC). Examined BRAM protection from on-chip malicious processes (e.g malicious drivers or corrupt devices).

2008 - 2014	**BSc in Informatics & Multimedia, TEI of Crete**

Diploma Thesis: Copy-Paste Application via IP
Created a web-platform mechanism (used html, css code) and java desktop application which transports data from user to user via Restful services. Used php and mySql database services for saving data.

JOB-RELATED SKILLS

▪ Use of LMS (Moodle, OpeneClass etc),
▪ E-Learning Authoring Tools (eg. Macromedia Flash, HotPotatoes, zaption)
▪ Software development in Linux + C
▪ C, HTML, CCS, Shell scripting (bash/awk)
▪ Low level software, Linux driver, kernel programming
▪ Visualization/Graphics tools (Heatmap, Grace)
▪ Multithreaded application development for high performance
▪ System programming, IPC, processes, POSIX threads, IPC
▪ Software design on ARM (Zedboard & microprocessors)
▪ Latex, Libreoffice, MS Ofice
▪ Adobe (Flash, Premiere, After Effecs, Dreamweaver cs6)
▪ Wordpress & Plesk

OTHER LANGUAGE(S)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
	Michigan State University(MSU)				
Italian	B2	B2	B2	B2	B2
	Certificato Di Conoscenza Della Lingua Italiana				

PUBLICATIONS

INTERNATIONAL CONFERENCES

[1] M.D. Grammatikakis,. N. Mouzakitis, S. Ntallaris, V. Piperaki, et al., "On-the-fly Secure Group Communication on CAN Bus", in 6th International Conf. in Electronics Pervading Industry, Environment and Society, APPLEPIES 2018. 27 September 2018, Pisa, Italy

[2] A. Papagrigoriou, M.D. Grammatikakis, V. Piperaki, " A Hybrid Channel for Co-Simulation of Behavioral SystemC IP with its Full System Prototype on FPGA ", International Conf. in Design and Verification - conference and Exhibition, DVCON 2018, Munish, Germany.

[3-4] M. Grammatikakis, S. Kavadias, K. Papadimitriou, V. Piperaki, et al., "Architectural Style, State-of-the-Art-and-Challenges, Chip-Level Communication Services, and Evaluation", in Distributed Real-Time Architecture for Mixed-Criticality System-level modeling and SystemC (2 invited chapters), Eds. R. Obermaisser, H. Ahmadian, and J. Perez, Taylor & Francis Group, CRC Press, Chapter 7, and 11 (resp. 28, 30 pages), 2018.

[5] G. Tsamis, M.D. Grammatikakis, A. Papagrigoriou, P. Petrakis, V. Piperaki, et al., "Soft Real-Time Smartphone ECG Processing", in 12th IEEE International Symposium on Industrial Embedded Systems, Toulouse, France, 2017.

[6] K. Papadokostaki, S. Charitakis, G. Vavoulas, S. Panou, V. Piperaki, et al., "News Articles Platform: Aggregating and Searching News Articles using Semantic Web", International Conference on Integrated Information, Athens, 2016.

CONTEST/OPEN SOURCE

[1] V. Piperaki, A. Mouzakitis and M.D Grammatikakis, "Hierarchical security primitives based on a Network-on-Chip", Xilinx Open hardware Design Contest, 2018 [Online], Available:
http://www.openhw.eu/2018-finalists.html
Open source in github: https://github.com/angmouzakitis/student_xohw18-187

[2] V. Piperaki, A. Papagrigoriou, and M.D Grammatikakis, "Co-simulation framework between a behavioral SystemC model and its full system prototype on FPGA", 2018 [Online], Available: https://sourceforge.net/projects/sc-cosim