

3rd International Workshop on Microsystems

Sindos Campus, ATEI Thessaloniki, 19 December 2018

**3rd International Workshop
on Microsystems**
19 December 2018
**Sindos Campus
ATEI Thessaloniki**

- Energy microsystems
- Sensors and sensor electronics
- Embedded systems
- Cyber Physical Systems
- Industrial automation and control
- Microelectronics and nanoelectronics
- Micro-electro-mechanical systems
- Computing for microsystems

Registration:
Please register your intention to participate
by e-mail to: info@microengineering.teth.gr
The registration is free of charge.

Abstract submission deadline: 11 November 2018, by e-mailed to: info@microengineering.teth.gr
Choose between a 300-word or 2-page IEEE-format abstract.
All abstracts will be published online in a workshop proceedings edition.
A best paper award will be granted, sponsored by Iosnatic Electronics, Marasil 78, Thessaloniki

Conference website: www.microengineering.teth.gr/WoMREC2018
Venue: Lecture Theater, Automation and Informatics Building, Sindos Campus,
ATEI Thessaloniki, Greece

Preliminary programme:
09:00-09:30: Registration / Coffee
09:30-09:45: Welcome and Introduction
09:45-11:00: Plac card session
11:00-11:15: Coffee break
11:15-12:30: Session and session
12:30-13:00: Poster session
13:00-13:15: Best Paper Award / Summary

Organizer:
N. E. Katsigros, Dep. Automation Eng.
ATEI Thessaloniki

Session Chairs:
Prof. Aikis Hatzopoulos,
Dep. Electrical & Computer Eng., AUVN
Prof. Dimitrios Papakostas,
Dep. Electronic Eng., ATEITh

Technical Programme Committee
D. Bechian,
M. Drakaki,
M. E. Katsigros,
Z. Papadopoulos,
F. Stergiopoulos,
D. Tsimaroulidis,
A. Tsagaris,
C. Voulas,
C. Zogzas

sponsors:



Workshop Proceedings

Introduction

This workshop brings together research and development from a large spectrum of science and engineering fields related to the implementation of microsystems in the new era of distributed information technologies. As cloud computing services and smart portable systems are becoming ubiquitous and more advanced, new possibilities for interdisciplinary research emerge. The microsystems that comprise the so-called internet of things will encompass a wide range of technologies including new energy sources, energy and information electronics, sensor systems, smart and energy efficient control and computing, telecommunications and networking, and also nanotechnology and micro-electro-mechanical systems. Continuing two successful workshops in 2016 and 2017, the 3rd International Workshop on Microsystems aims at bringing together related research and development advancements from the academic community and the industry. Scientific topics include but are not limited to::

Energy microsystems

Sensors and sensor electronics

Embedded systems

Cyber Physical Systems

Industrial automation and control

Microelectronics and nanoelectronics

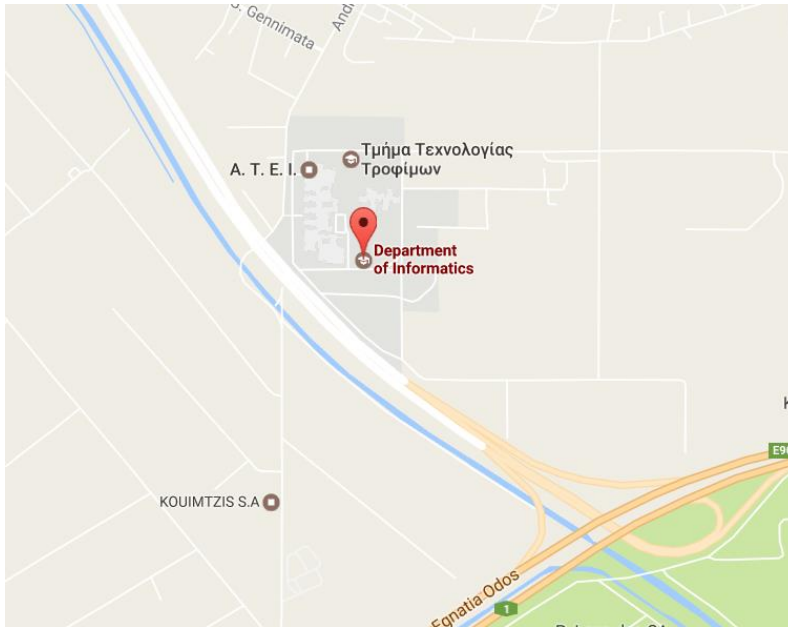
Micro-electro-mechanical systems

Computing for microsystems

Michail E. Kiziroglou
m.kiziroglou@autom.teithe.gr

Venue

Lecture Theater, [Automation and Informatics Building](#)
Sindos Campus, ATEI Thessaloniki, Greece



Date

Wednesday, 19th of December, 2018

Organizer

Michail E. Kiziroglou

Session Chairs

Prof. Dimitrios Papakostas, Dep. Electronic Eng., ATEITH
Prof. Alkis Hatzopoulos, Dep. Electrical & Computer Eng., AUTH

Reviewing Committee

Dimitrios Bechtsis
Maria Drakaki
Chrisovalantou Ziogou
Michail E. Kiziroglou
Simira Papadopoulou
Fotis Stergiopoulos
Dimitris Triantafyllidis
Apostolos Tsagaris
Christos Yfoulis

Organization and Technical Support

Maria Pagkrakioti, Kostantinos Pakas and Konstantinos Karakostas

List of Authors

No	Last Name	First Name / Initials	Affiliation
1	Astaras	Alexander	ATEI Thessaloniki
2	Bechtsis	Dimitris	ATEI Thessaloniki
3	Daoultzis	A.	ATEI Thessaloniki
4	Dedeoglou	Dimitris	ATEI Thessaloniki
5	Drakaki	Maria	ATEI Thessaloniki
6	Gkagkanis	Efstratios	ATEI Thessaloniki
7	Hatzopoulos	Alkis	AUTH
8	Isaakidis	G.	ATEI Thessaloniki
9	Karakostas	Konstantinos	AUTH
10	Karnavas	Y. L.	ATEI Thessaloniki
11	Katsaliaki	Korina	IHU
12	Kiziroglou	Michail E.	ATEI Thessaloniki
13	Kollensperger	Peter	Norwegian University of Science and Technology
14	Mallioris	Panagiotis	ATEI Thessaloniki
15	Nikolaides	Nikolaos	ATEI Thessaloniki
16	Nitsas	Vasileios	Microbiology Laboratories, Kalamaria
17	Panagiotopoulos	K.	ATEI Thessaloniki
18	Panayiotou	K. L.	AUTH
19	Papadopoulou	Simira	ATEI Thessaloniki
20	Petrou	Loukas	AUTH
21	Philotheou	A.	AUTH
22	Sampri	Anastasia	ATEI Thessaloniki
23	Spiropoulos	A.	ATEI Thessaloniki
24	Stergiopoulos	Fotis	ATEI Thessaloniki
25	Symeonidis	A. L.	AUTH
26	Triantafyllidis	Dimitris	ATEI Thessaloniki
27	Tsardoulis	E. G.	AUTH
28	Xanthos	Stelios	ATEI Thessaloniki
29	Yfoulis	Christos	ATEI Thessaloniki
30	Zolotas	C.	AUTH

Programme

08:45-09:15: Registration

Please check-in or register at the front desk

09:15-09:30: Welcome and introduction

09:30-10:45: First Oral Session (Session Chair: Prof. Dimitrios Papakostas)

09:30 – 10:00: *Dr. Manos Tsardoulis, Aristotle University of Thessaloniki, Greece, 18WOM-01* (keynote).

10:00: Development of an Unmanned Surface Vehicle at a Port Emulation Environment, *P. Mallioris and D. Bechtsis, 18WOM-02*

10:15: A Vision-based ball and plate control system, *D. Dedeoglou and Ch. Yfoulis, 18WOM-03*

10:45-11:15: Coffee Break and Poster Session

Portable Optical Sensor For A Non – Invasive Blood Cell Counting Method, *K. Karakostas, S. Gkagkanis, K. Katsaliaki, P. Kollensperger, V. Nitsas, A. Hatzopoulos and M. E. Kizioglou, 18WOM-04.*

11:15 – 11:45: Prof. Georgios Sirakoulis, Democritus University of Thrace, Greece, 18WOM-05 (keynote).

11:45-12:30: Second Oral Session (Session Chair: Prof. Alkis Hatzopoulos)

11:45: A lab-scale, flexible Variable Frequency Drive for Three-Phase Motors, *D. Triantafyllidis, A. Daoultzis and F. Stergiopoulos, 18WOM-06*

12:00: A multi-sensor medical decision support system for early alerting during pneumonological operations performed on neonates, *K. Panagiotopoulos, A. Sampri, A. Astaras, S. Xanthos and N. Nikolaides, 18WOM-07*

12:15: Real-Time Motion Control of a Built Palletizing Robotic Arm. *A. Spiropoulos, G. Isaakidis, M. Drakaki and Y. L. Karnavas, 18WOM-08*

12:45-13:00: Best Paper Award by Ioannidis Electronics. Concluding remarks.

WORKSHOP ABSTRACTS