

PERSONAL INFORMATION	
<b>SURNAME:</b>	<b>KALTSAS</b>
<b>NAME:</b>	<b>GRIGORIS</b>
<b>PLACE OF RESIDENCE:</b>	<b>ATHENS, GREECE</b>
<b>e-mail:</b>	<b>G.Kaltsas@uniwa.gr</b>
<b>Scopus:</b>	<a href="https://www.scopus.com/authid/detail.uri?authorid=7004156207">https://www.scopus.com/authid/detail.uri?authorid=7004156207</a>
<b>Googlescholar:</b>	<a href="https://scholar.google.com/citations?user=jtiu7beaaaaj&amp;hl=en">https://scholar.google.com/citations?user=jtiu7beaaaaj&amp;hl=en</a>
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## CURRENT POSITION

<b>03.2018 - Today</b>	<b>Professor</b> School of Engineering, Department of Electrical and Electronics Engineering, University of West Attica, Greece
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## EDUCATION

<b>11.1993 - 03.1999</b>	School of applied mathematical & physical sciences, National Technical University of Athens, Greece, Ph.D. in Microelectronics, Thesis title: "Integrated gas flow and gas sensors using porous silicon technology"
<b>03.1993 – 06.1994</b>	Institute of Microelectronics, NCSR "Demokritos", Greece, MSc in Microelectronics
<b>09.1988 – 03.1993</b>	Physics Dept., University of Athens, Greece, B. Sc. in Physics

## RESEARCH RECORD

### Scientific Publications:

Patents:	5	(2 PCTs)
International scientific Journals (ISI index):	75	
International Conference proceedings:	68	
National Conference proceedings:	15	

### Citations:

Source: Scopus (<http://www.scopus.com>)

- At least 1012 citations (h-index: 19), from which the 718 are hetero-citations, where self-citations of all authors have been excluded.

Source: Google Scholar (<https://scholar.google.gr>)

- At least 1.390 citations (h-index: 20, i10-index: 40).

### Ten (10) representative publications, from the last ten (10) years

- D. Barmpakos, V. Belessi, R. Schelwald and Grigoris Kaltsas "Evaluation of Inkjet-Printed Reduced and Functionalized Water-Dispersible Graphene Oxide and Graphene on Polymer Substrate—Application to Printed Temperature Sensors" **Nanomaterials**, **2021**, 11(8), 2025; <https://doi.org/10.3390/nano11082025>
- D. Barmpakos, G. Kaltsas "A review on Humidity, Temperature and Strain Printed Sensors - Current trends and future perspectives" **Sensors**, **2021**, 21(3), 739, <https://doi.org/10.3390/s21030739>
- D. Barmpakos, A. Moschos, T. Syrovoy, T. Koutsis, L. Syrova and G. Kaltsas "A fully printed flexible multidirectional thermal flow sensor" **Flexible and Printed Electronics**, 5 (2020) 035005, <https://doi.org/10.1088/2058-8585/aba6f4>.
- "A thermal flow sensor with a 3D printed housing for spirometry applications" T. Koutsis, P. Pikasis, A. Psyrris, G. Kaltsas, **Microelectronic Engineering**, Vol. 226(1) 2020, 111286; <https://doi.org/10.1016/j.mee.2020.111286>.
- "Bioelectrical Analysis of Various Cancer Cell Types Immobilized in 3D Matrix and Cultured in 3D-Printed Well" G. Paivana, S. Mavrikou, G. Kaltsas, S. Kintzios, **Biosensors** 2019, 9, 136; <https://doi.org/10.3390/bios9040136>
- "A Bioelectronic System to Measure the Glycolytic Metabolism of Activated CD4+ T Cells" S. M. Crowe, S. Kintzios, G. Kaltsas and C. S. Palmer, **Biosensors** 2019, 9(1), 10; <https://doi.org/10.3390/bios9010010>

7. "Design and Evaluation of a 2D Thermal Flow Sensor on Flexible Substrate" A. Moschos, I. Th. Famelis, D. Barmpakos, D. Marinatos and G. Kaltsas, **Journal of Sensors**, Volume 2019, Article ID 8476489, <https://doi.org/10.1155/2019/8476489>
8. "A screen-printed flexible flow sensor" A. Moschos, T. Syrový, L. Syrová and G. Kaltsas, **Measurement Science and Technology**, 28 (2017) 055105; <https://doi.org/10.1088/1361-6501/aa5fa0>
9. "Gas-mass-flow transfer-rate simulation and experimental evaluation in microchannels" G. P. Patsis, K. Ninos, D. Mathioulakis, and G. Kaltsas, **Microsystem Technologies**: Volume 19, Issue 12 (2013) 1919-1925; <https://doi.org/10.1007/s00542-013-1763-6>
10. "Modelling and evaluation of a thermal microfluidic sensor fabricated on plastic substrate" G. P. Patsis, A. Petropoulos, G. Kaltsas, **Microsystem Technologies**, 18 (3), (2012) 359-364; <https://doi.org/10.1007/s00542-011-1409-5>

#### Granted patents

##### **International Patents**

- "Integrated Gas Flow Sensor Based on Porous Silicon Micromachining"  
Ref: PCT/GR97/00040, WIPO: 12/11/1998, European submission No 979133469, 7/11/1999  
Inventors: A. G. Nassiopoulou, G. Kaltsas
- "Low Power Silicon Thermal Sensors and Microfluidic Devices based on the use of Porous Silicon Sealed Air Cavity technology or Microchannel technology"  
Ref: PCT/GR03/00003, Inventors: A. G. Nassiopoulou, G. Kaltsas, D. N. Pagonis

##### **National Patents**

- "Flow meter and special designed packaging for use in medical equipment for breath control"  
OBI Number: 1004237  
Inventors: A. Nassiopoulou, G. Kaltsas

#### Invited presentations to international conferences

- "Flexible Electronics, Sensors and Systems", 4<sup>th</sup> Scientific conference "Smart Packaging and Marketing", Athens, Feb. 24, 2018
- "Sensors integration on Flexible Substrates", Printing of Functional Applications Summer School, Swansea University, UK, July 11-15, 2016.
- "Flexible Electronics, Sensors and Systems", Educational seminar on printed electronics and smart packaging, Athens, May 14, 2016
- "Sensors integration on Flexible Substrates", Early Researcher Summer School "Science and engineering of printable electronics", Swansea University, UK, July 13-17, 2015.
- "Sensors integration on Flexible Substrates", Early Researcher Summer School "Science and engineering of printable electronics", Swansea University, UK, July 9-13, 2014.
- "Flexible Electronics and Systems", 1<sup>st</sup> Workshop on Printed Electronics, Athens, March 8, 2014
- "PCB-MEMS: Towards Flexible Sensors and Systems" within the frame of ERASMUS-IP: "Transparent Electronics: From Materials & Devices to Devices & Systems", Summer School, Crete, 7-20 July 2013
- "A new technology which allows direct integration on flexible substrates – Application to microfluidics and various thermal sensors" 2nd REGMINA workshop on MEMS and NEMS technologies, Belgrade, Serbia, Apr 18-20, 2011.
- "Porous Silicon Micromachining", 4th Int. Con. on Porous Semiconductors Science and Technology (PSST 2004), Cullera-Valencia, Spain, March 14-19, 2004.
- "Gas and Gas Flow Silicon Integrated Sensors", Series of (3) lectures at NSCSR "Demokritos" summer school in the period: 1996-98
- "Microsystems – Integrated silicon sensors with applications in gas and gas flow sensors", Series of (3) seminars in ICT, NSCSR "Demokritos", 2000.

#### Organization of international conferences

- The PI was the head of the organizing committee (Technical Program Chairman) of the international scientific conference "Eurosensors 2011". The conference took place in September 2011 at the Megaron - The Athens Concert Hall. It was attended by more than 550 participants, coming from the major European and international universities, research centers and companies. The technical program consisted of 434 contributions originated from 46 countries.
- Member of the International Program Committee of the "Eurosensors" international conference (2012 – 2020)
- Member of the International Program Committee of the "Micro-and Nano-Engineering (MNE)" international conference (2008 – 2020)

- Member of the International Program Committee of the “ALLSENSORS” international conference (2018 – 2020)
- Member of the International Program Committee of the “SENSORCOMM” international conference (2018 – 2019)
- Member of the International Program Committee of the “HORA” international conference (2020)
- Member of the organizing committee of the conference “Porous Semiconductors Science and Technology (PSST 2004)”, Cullera-Valencia, Spain, March 2004
- Member of the organizing committee of the conference “Microelectronics Microsystems Nanotechnology (MMN 2004)”, Athens, Greece, Nov. 14-17, 2004
- Member of the organizing committee of the conference “Microelectronics Microsystems Nanotechnology” (MMN 2000)”, Athens, Greece, Nov. 20-22, 2000

#### Prizes/Awards/Academy memberships

- In 2004 the PI has been awarded from the minister of development by the General Secretariat for Research and Technology for the patent “Flow meter and special designed packaging for use in medical equipment for breath control”, for the contribution to the technological progress of the country.
- The PI was awarded with the “Tony B. Academic Travel Award for up-and-coming researchers who have demonstrated outstanding achievement in laboratory science and technology” in the SLAS 2012 conference (San Diego, CA, USA, Feb 2012).
- Since 2011 Dr. G. Kaltsas has been nominated as the head of EMBIO Diagnostics Ltd (EMBIO) (<http://www.embiodiagnostics.com/>) Scientific Board, which is the world leader in cell-based biosensors and an expert in the dissemination of biosensor technology at a global scale.
- Head of the Department of Electronic Engineering, of TEI of Athens (2013-2018)
- Director of the sector “Computational Systems and Control” of the Department of Electrical and Electronics Engineering of the University of West Attica (2018-today)
- Director of the MSc program “Internet of Things and Intelligent Environments”, Department of Electrical and Electronics Engineering, University of West Attica (2018-today)
- Erasmus+ Departmental Coordinator [Dept. Electrical and Electronics Engineering, UniWA, (2018-today), Dept. Electronic Engineering, TEI-A (2015-18)]
- Deputy Dean of the School of Technological Application of TEI-A (2016-17)
- Director of the sector “Computational Systems and Control” of the Department of Electronic Engineering of TEI-A (2010-13)

#### Research Laboratory Foundation

The PI is the founder and the head of the “Microsystems, Sensors, Embedded Devices and Automation” laboratory - microSENSES (<http://microsenses.eee.uniwa.gr/>), which is under the dept. of Electrical and Electronics Engineering of UniWA (FEK 515/3-4-2015). The microSENSES laboratory was initially established in 2009 at TEI-A in order to enhance the research activities in the general field of microsystems, sensors, microfluidics and embedded devices, while it aims at building-up an internationally competitive research Laboratory. Many BSc-MSc-PhD students, who were members of the laboratory are now employed in industry or in Academic positions in Greece and abroad.

#### FELLOWSHIPS and AWARDS

<b>1993 - 1997</b>	PhD Fellow, Inst. of Microelectronics, NCSR “Demokritos”
<b>2004</b>	GSRT award for the patent “Flow meter and special designed packaging for use in medical equipment for breath control” given by the minister of development.
<b>2012</b>	“Tony B. Academic Travel Award” for up-and-coming researchers who have demonstrated outstanding achievement in laboratory science and technology, for the work: A. Petropoulos, D. N. Pagonis, G. Kaltsas, “A PCB integrated wide range microfluidic flow sensor with controllable sensitivity” SLAS 2012, San Diego Convention Center, San Diego, CA, USA, Feb 4-8, 2012

#### RESEARCH PROJECTS

Project Title	Funding source	Period	Role of the PI
CURE: “Constructing a ‘Eubiosis Reinstatement Therapy’ for Asthma”	FET-Horizon 2020, Grant No 767015	2017-2021	Research Collaborator

Development of flexible printed sensors with inkjet technology	Internal TEI-A Project	2015-2016	Coordinator
Design and fabrication of ecological envelop with embedded electronic device	Industrial project (funded by Greenmind)	2014-2015	Coordinator
“Integrating devices and materials: a challenge for new instrumentation in ICT (IDEM)”	COST Action IC1208	2013-2017	Member of management committee
“New possibilities for print media and packaging - combining print with digital”	COST Action FP1104	2012-2014	Member of management committee
DISFER: Distributed Sensor Systems for Emergency Response	THALES II, National project	2012-2016	Member of the main research team
Study, design and fabrication of a wireless transmission system for taxation data of cash machines via short message service (SMS)	Industrial project (funded by iTax)	2011	Member of the main research team
“Measurement of shear stress in the interface between fluid-solid through an innovative flexible thermal microsensor”	PEBE, National project	2010-2012	Member of the main research team
BioliSME: «Speedy system for sampling and detecting <i>Listeria monocytogenes</i> in agro-food and related European industries»	FP7	2009-2011	Member of the main research team
“Study and fabrication of a diphasic micro-cooler (DMC) using thermal integrated sensors (flow, pressure and temperature)”	Greece-France Bilateral Collaboration	2006-2008	Coordinator
“Development of an electromechanical device for controlling of physical parameters by combining microelectronics and PCB technology”	ARCHIMIDES II: National Project	2005-2007	Coordinator
“Integrated hybridic microfluidic multi-sensors devices in meso-scale”	PENED: National Project	2005-2008	Coordinator
“Development of extra sensitive liquid flow sensor”	Industrial project, funded by Unilever UK	2005-2006	Coordinator
“Study of an integrated thermal accelerometer”	Internal TEI-A Project	2005-2007	Coordinator
“Electromagnetic distortions and correlation with earthquakes”	ARCHIMIDES I, National project	2004-2006	Member of the main research team
“Automatic characterization, simulation and theoretical study of nano-structures and electrical devices”	ARCHIMIDES I, National project	2004-2006	Member of the main research team
SAFEGAS: “Sensor array for fast explosion proof gas monitoring”	EU-GROWTH, Contract No G1RD-CT-1999-00167	2000-2001	Research collaborator
PST-sensors: “Integrated gas flow and gas sensors by using porous silicon micromachining”	ESPRIT INCO No 950507	1997-1999	Research collaborator
“Real time study of seismic electric anisotropy and application in earthquakes prediction”	PENED, National project	1996-1998	Member of the main research team
“Development and Applications of High-Tc superconductors”	EPET II, National project	1995-1998	Research collaborator
“Satellite exchange of seismological data”	MEDNET network	1994-1996	Research collaborator
EOLIS: “Emission of Light in silicon”	ESPRIT BRA EOLIS No 7228	1992-1995	Research collaborator