

CURRICULUM VITAE and SCIENTIFIC ACTIVITY

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Communication Data:

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Personal Data:

Year and Place of Birth: 1957, Thessaloniki, Greece
Home Address: Eleftherias 13, 57010, Pefka - Thessaloniki

Education:

B.Sc. Degree: Physics, by the Physics Dept, Aristotle University of Thessaloniki (1980)
Ph.D. Degree: Physics, by the Physics Dept, Aristotle University of Thessaloniki (1989)
Ph.D. Title: "A Speed Control Configuration for DC Motors based on the Phase Locked Loop Principle"

Research Interests:

Electronic Circuits for Measurements and Control, Electronic Circuits and Systems Design, Instrumentation, Measurements and Automation Systems, Sensors Interfacing Circuits, DC Motor Control Systems, Microcontroller based Systems, and Educational Issues for Electronic Systems

RESEARCH ACTIVITY

A. Outline

Organization and implementation of research work (personal, in collaboration with other experienced researchers, and work of a team of associates and students) in areas directly related to circuits and systems for measurement and control (automation). Head of a team which is actively involved in research activities in the same areas (one post-doctoral researcher, two Ph.D. Students, and a small number of postgraduate and undergraduate students).

The research interests are focused in the areas of circuits and systems for electronic measurements and instrumentation applications. The research activities are implemented either as independent academic research work, or in the framework of external financed research projects (a detailed list of the projects is shown below). The list of publications includes 40 papers in international journals, 100

papers in international conferences, 16 papers in national conferences, 11 Books/book chapters, and one patent.

Other results of externally financed applied research work (of unpublished type) include the development of electronic systems for environmental measurements in waters (basic physical parameters of water) in collaboration with the Dept. of Geology, A.U.Th. Three different generations of an original telemonitoring network of remote stations (circuits and software) especially designed for the specific applications have been developed over the years (from 1995 till today). A total of more than 35 such remote stations have been installed in 6 different areas of Greece in the framework of these projects. Today the team supports technically the operation of a total of 18 such stations in three different areas of Greece (islands of Santorini and Insures, and Lignite mines of Ptolemaida).

The overall research activities can be categorized in five different areas:

1. Design and study of sensors interfacing circuits and parameter converters for instrumentation and measurement systems (Phase Detectors, A/D converters, F/V & T/V converters, current-mode interfacing, etc).
2. Physical quantities measurement techniques and related data analysis techniques (ultrasonic systems, power consumption of circuits and microcontrollers, multi-parameter gas sensors, neural networks analysis techniques, etc).
3. Design, development, installation, and technical support of the operation of automated measurements systems based on microcontrollers. These systems are mainly the stations for monitoring water parameters for environmental applications, but also include the development of measurements techniques (i.e. movements of micro-machined elements, vibration harvesters), for measuring parameters in electrochemistry, in soil mechanics, in geology, etc.
4. Design, analysis and measurements for characterization of electronic circuits with chaotic behavior.
5. Studies on educational issues related to teaching electronic circuits and systems (teaching approaches, content, etc).

The "H - index" given by the known search engines for these publications at the end of 2013 is between 9 (ISI/WoK) and 16 (PoP/Harzing).

B. Research Projects

B.1. Projects (Principal Investigator - Head of the Project)

- B.1.1. "Design and development of power supply circuitry for a micro pump of a microfluidic control system for biomedical applications",
Financed by: GSRT (Greek National Research Funding Organization), Greece - Spain Collaboration Program, 1997-1999
- B.1.2. "Study, Development and Operation of a network of stations for measuring environmental parameters",
Financed by: Greek Geothermal (private company), 1997-1999
- B.1.3. "The role of calibration laboratories within the quality assurance system"
Financed by: GSRT, "DIAVLOS" Program for postgraduate students education, 1998
- B.1.4. "Development of an intelligent sensing instrumentation structure",
European project of 4 collaborating laboratories for universities of Greece, Italy, Ukraine, Belarus.

Head of the Greek Team and Principal Investigator (coordinator) of the whole project.
Financed by: INTAS / E.U., 1998-2001

- B.1.5. "Intelligent monitoring system for explosive and dangerous gases based on multi-parameter sensors",
Financed by: GSRT (Greek National Research Funding Organization), Greece - Poland Collaboration Program, 2001-2004
- B.1.6. "Technical support for the operation and testing of the network of station for water temperature and sea-level monitoring of the Santorini volcano"
Financed by: "Institute for the Study and Monitoring of the Santorini Volcano", 2001-2008
- B.1.7. "Maintenance and technical support for the "REMOS" network of monitoring station at the Nestos River"
Financed by: Electric Power Corporation of Greece (DEI), 2005-2007
- B.1.8. "Research for the development of a network of electronic stations for an integrated environmental monitoring of water eco systems"
Financed by: Greek Ministry of Education, EPEAEK - Pythagoras II program, 2005-2007
- B.1.9. "Instruction Parameters Analysis for power modeling of embedded microprocessors"
Financed by: GSRT (Greek National Research Funding Organization), Greece - Ukraine Collaboration Program, 2005-2007
- B.1.10 "Development and Control of a Flexible Robotic Wing for Underwater Applications"
Financed by: GSRT (Greek National Research Funding Organization), Greece - Spain Collaboration Program, 2006-2008
- B.1.11 "Development of a network for the remote monitoring of the water parameters at the mines of Lignite Center of Western Macedonia, Greece "
Financed by: Electric Power Corporation of Greece (DEI), 2007-2010
- B.1.12 "Maintenance, Documentation and Studies for the Environmental Monitoring System at the Nestos river"
Financed by: Electric Power Corporation of Greece (DEI), 2007-2009
- B.1.13 "Study and installation of a ground temperature monitoring station in the area of island Nisyros"
Financed by: Municipality of the island of Nisyros, 2008
- B.1.14 "Scientific and technical support of volcano-monitoring networks and of the volcanological museum of Nisyros island"
Financed by: Municipality of the island of Nisyros, 2009 - 2011
- B.1.15 "Development and technical operation of a network of measuring stations for remote monitoring of water parameters at LKDM (Lignite Mines Center of Western Macedonia)"
Financed by: Electric Power Corporation of Greece (DEI), 2009 - 2013
- B.1.16 "Operational and technical support and maintenance of the stations for monitoring water quality at the mines of "Kardia" and "Notio" of LKDM"
Financed by: Electric Power Corporation of Greece (DEI), 2011 - 2014
- B.1.17 "Technical Support of the network for remote monitoring environmental parameters of waters at the mines of Amyntaion field and main field at the Lignite Center of Western Macedonia"
Financed by: Electric Power Corporation of Greece (DEI), 2013 - 2014

B.2. Sub-contraction Projects (Team Leader)

- B.2.1 "Monitoring of the Santorini Volcano",
Financed by: E.U. - E.S.F. program, 1993-96,
P.I.: M. Fytikas, Dept. of Geology, A.U.Th.
Task of the Electronics Team: Development of a sea-level monitoring instrument
- B.2.2 "Research of environmental transactions at Nestos river by a network of remote stations",

Financed by: Electric Power Corporation of Greece (DEI), 1997-1999,
P.I.: A. Psilovikos, Dept. of Geology, A.U.Th.

Task of the Electronics Team: Development of an independent station for monitoring physical parameters of water

B.2.3 "Rational Management of the Mesologi-Etoliko lagoon"

Financed by: E.U. / "PESCA" program - Greek Ministry of Agriculture 1998-2000

P.I.: A. Psilovikos, Dept. of Geology, A.U.Th.

Task of the Electronics Team: Development of an independent station for monitoring physical parameters of water

B.3. Personal participation in Projects

B.3.1. "Design of analog CMOS integrated circuits for industrial instrumentation and measurements",

Financed by: GSRT (Greek National Research Funding Organization) - PENED'1991,

P.I.: C. Karybakas, Physics Dept. A.U.Th.

B.3.2. "Design of an application-specific integrated circuit (ASIC) for processing the signals from smart pressure sensors",

Financed by: GSRT (Greek National Research Funding Organization) - PENED'1995,

P.I.: S. Siskos, Physics Dept. A.U.Th.

B.3.3. "Study and design of an analog, low-voltage circuits library for applications in mobile instruments".

Financed by: GSRT (Greek National Research Funding Organization), Greece - France Collaboration Program, 2001-2002

P.I.: S. Siskos, Physics Dept. A.U.Th.

B.3.4. "Energy Aware System-on-Chip Design of the HIPERLAN/2 Standard"

Financed by: E.U. – IST program, 2001-2003

A.U.Th. Team Leader: S. Nikolaidis, Physics Dept. A.U.Th.

B.3.5 "Wireless Subscribing connections for a network of advanced services implemented on silicon (wireless mile)"

Financed by: GSRT, "PEPER-2000" program, 2004-2005

A.U.Th. Team Leader: S. Nikolaidis, Physics Dept. A.U.Th.

B.3.6 "Development of innovative sensor systems with distributed intelligence (MEMSENSE)"

Financed by: ESPA, "Corallia" / "Athena" Organization, 2010 - 2013

A.U.Th. Team Leader: S. Siskos, Physics Dept. A.U.Th.

B.3.7 "Next generation microwave radio-connection (NEXGENMILIWAVE)"

Financed by: ESPA, "Corallia" / "Athena" Organization, 2010 - 2013

A.U.Th. Team Leader: S. Siskos, Physics Dept. A.U.Th.

EDUCATIONAL ACTIVITY

A. Teaching Experience - Courses:

(Autonomous Teaching experience as lecturer-Assistant Prof.-Associate Prof. from 1990 till today. Current teaching activities include courses A1, A2, A3, A6, A8, A.9, A.10)

- A.1. Basic (Introductory) Electronics (*Core Course, Undergrad. Physics Cur., with other colleagues*)
- A.2. Electronic Circuits (*Obligatory in the specialization direction of "Electronics and Telecommunications", Undergrad. Physics Cur., alone*)
- A.3. Electronics Laboratory (*Core Course, Undergrad. Physics Cur., with other colleagues*)
- A.4. Electronic Measurement Systems (*Elective, Undergrad. Physics Cur., alone*)
- A.5. Digital Electronics (*Core Course, Undergrad. Informatics Cur., with other colleagues*)
- A.6. Electronic Circuits (*Post-grad. Electronics Cur., alone*)
- A.7. Automatic Control Systems (*Post-grad. Electronics Cur., alone*)
- A.8. Sensors and Measurement Systems (previous title: «Instrumentation and Measurement Systems (*Post-grad. Electronics Cur., with other colleagues*)
- A.9. Electronic Circuits Lab (*Post-grad. Electronics Cur., with other colleagues*)
- A.10. Micro-controllers and Measurement Systems Lab (*Post-grad. Electronics Cur., with other colleagues*)

B. Supervision of Under- & Post- Graduate Theses, and Doctoral (Ph.D.) Theses:

- B.1. Theses of Undergraduate Students (Physics): more than 25
- B.2. Theses of Postgraduate Students (Electronics): more than 25
- B.3. Ph.D. Thesis: Name: Christos Papageorgiou, Title: «Measurement Systems with Ultrasonic Sensors based on micro-controllers», Physics Dept. - A.U.Th., 2004
- B.4. Ph.D. Thesis: Name: Vasilis Konstantakos, Title: «Techniques for measuring the power consumption and evaluating the correct operation of electronic circuits», Physics Dept. - A.U.Th., 2010
- B.5. Co-supervision of the Ph.D. Thesis: Name: Andrii Borovyi, Title: "Information Measurement System for Estimating Parameters of CPUs Energy Consumption", Research Institute for Intelligent Computer Systems, University of Ternopil, Ukraine, 2012
Mr. A. Borovyi performed the research work for his Ph.D. in A.U.Th. with a scholarship from the "Greek State Scholarships Foundation" two periods of 17 months in total. Co-supervisor: prof. V. Kochan, University of Ternopil, Ukraine
- B.6. Ph.D. Thesis: Name: Kyriakos Tsiakmakis, Title: «A system for measuring and controlling the movement of electromechanical micro-actuators based on IPMC materials», Physics Dept. - A.U.Th., Finished, to be examined in January 2014
- B.7. Ph.D. Thesis: Name: Ioannis Kosmadakis, Title: «Supply voltage conversion circuits and power management techniques for electronic micro-systems», continued

SCIENTIFIC ACTIVITY

Work experience:

- Associate Professor at the Physics Dept. A.U.Th., 2003 -
- Assistant Professor at the Physics Dept. A.U.Th., 1993 - 2003
- Lecturer at the Physics Dept. A.U.Th., 1990 - 1993

- Scientific Associate at the Physics Dept. A.U.Th.,1981 - 1990

International Scientific Activity:

- Associate Editor of the scientific journal IEEE Transactions on Instrumentation and Measurement. Management of about 35 papers per year.
- Chairperson of the International Advisory Board (IAB) of the international conference "IEEE International Workshop on Intelligent Data Acquisition and Advanced Computing Systems" (6 conferences, from 2001 to 2011, succeeded by prof G. Markowsky (USA)), now member of the IAB till today (www.idaacs.net).
- Chairperson of the Permanent (Standard) Scientific/Technical Committee for Education of IEEE Instrumentation and Measurement Society (Technical Committee on Education, 1997-2010) and member of the Editorial Board of IEEE Instrumentation & Measurement Magazine (1997-2009)
- Chairperson of the International Technical Program Committee of the 1st conference "IEEE International Workshop on Intelligent Data Acquisition and Advanced Computing Systems", IDAACS-2001, (co-chair with prof. R. Hiromoto, University of Texas, USA)
- Member of the Editorial Board of two (2) scientific journals (International Review on Electrical Engineering, International Scientific Journal of Computing)
- Evaluator (reviewer) of papers in a significant number of scientific journals (Electronics Letters, IEEE Trans. on Industrial Electronics, IEEE Trans. on Instrumentation & Measurement, IEEE Trans. on Neural Networks, Measurement Science & Technology, Measurement, Microprocessors & Microsystems, Computer Standards & Interfaces, Circuits Systems and Computers, etc)
- Member of scientific committee (Technical Program Committee, TPC) and papers reviewer in a significant number of international conferences, special sessions organizer, sessions chair, etc (especially at the annual IEEE I2MTC - IEEE International Instrumentation & Measurement Technology Conference has served as member of the TPC all the last 12 years), also the same for the IDAACS conference since its establishment in 2001.
- Member of the Technical Committee for Environmental Measurements of the International Measurement Confederation (IMEKO) www.imeko.org, <http://joomla.imeko.org/index.php/tc19-homepage>
- Research Proposals Evaluator for the National Research Organizations of :
Italy (MIUR: <http://www.istruzione.it/>, CINECA: <http://www.cineca.it/>)
Slovakia (<http://www.apvv.sk/agentura?lang=en>)
and Georgia (<http://www.rustaveli.org.ge/index.php?lang=eng>)
- Honorary Chair of the 8th IEEE International Conference on Imaging Systems and Techniques-2011, Penang, Malaysia (<http://ist2011.ieee-ims.org>).
- Lectures in 4 universities of other countries (Univ. of Barcelona - Spain, Univ. of Calabria - Italy, Univ. of Gliwice - Poland, Univ. of Ternopil - Ukraine)
- Co-supervisor of a doctoral dissertation of the University of Ternopil (Ukraine): in co-operation with prof. V. Kochan, joint supervision of the Ph.D. research work of Mr. Andrii Borovyi. The title was awarded in 2012.
- External examiner of the Ph.D. thesis at the Physics Dept. / University of Barcelona, Spain, and Students Projects at the Superior School of Electronics in Setubal - Portugal.
- Coordinator of students exchange agreements with related Departments of 9 European Universities in the framework of the "Erasmus" academic exchange program: 1)Germany/Bremen, 2)Italy/Calabria, 3)Italy/Sannio-Benevento, 4)Slovakia/Kosice, 5)Spain/Barcelona, 6)Spain/Navarra, 7)Poland/Gliwice, 8)Portugal/Lisbon, 9)Romania/Iasi
- Senior member of the Institute of Electrical & Electronics Engineers - I.E.E.E. (Member-1989, Senior Member-1997)

Scientific Activity in Greece:

- Invited speaker in workshops: [1.University of Patras (to honor prof. emeritus Theod. Deligiannis - 2006), 2.Technological Educational Institution of Lamia (celebration of 30 years of the Electronics Dept., 2013)] and National Conferences (National Conference of Physics/Greek Physicists Association, Larisa 2006 and Kavala 2008)
- Member of the organizing/scientific committees of national conferences (National Hellenic Conference for Electronics and Telecommunications PACET-1(2009) & PACET-2(2012), National Hellenic Metrology Conference)
- Research proposals evaluator of the program «Karatheodori» of the University of Patras, Greece 2010 κ. 2006, and external evaluator of the Postgraduate Program of Studies “Electronics and Information Processing” organized by the Physics Dept. of University of Patras (2008).
- Member of advisory committees and external examination committees at other departments of Greek Universities (Dept. of Electrical and Computer Engineers of Aristotle Univ., Dept. of Electrical and Computer Engineers of Univ. of Thrace, Dept. of Elementary Education of Univ. of Ioannina)
- Academic Coordinator of the Physics Dept for the European educational collaboration program “Erasmus” (2005 - 2011)
- Examiner at the National examination of the “State Scholarships Foundation” (IKY - 1995) and examiner at the National examination for Students from abroad (2001).

Administrative Experience at Academic/Scientific Organizations:

- Chairperson (Head) of the Physics Department, A.U.Th., 2011-2013
[www.physics.auth.gr - Physics Dept. /A.U.Th. has about 2.000 students, 80 professors (of different levels) and 25 members of supporting stuff (Technical, administrative)]
- Member of the Senate of Aristotle University, 09/2011-12/2012
- Vice-chair of the Physics Dept. A.U.Th., 2009-2011
- Director of Studies (Academic Director) of the Postgraduate Course in Electronics and Communications, Physics Department, Aristotle University of Thessaloniki, 2010-2013
- Director of the Section of Electronics and Computers, Physics Dept. A.U.Th. (2005-07)
- Member of the “Electronic Administration Committee” of A.U.Th., 2010 - till today. The 10 members committee supervises the 4 Centers of Networks, Informatics and Communications Technology Infrastructure at A.U.Th. (www.it.auth.gr).
- Member (repeatedly) of the General Assembly (administrative body) of the Physics Department - A.U.Th., member (over different years) of certain administrative committees of the Physics Dept. (Lab. courses Committee, Finance Com., Program of Studies Com., Scholarships Com.)
- Responsible for re-organization of educational laboratories in related fields: electronic circuits and measurement systems (undergraduate and postgraduate)
- Member of the Board of Directors of the “Institute for the Study and Monitoring of the Santorini Volcano”, (2 terms: 2006-2009 member, 2009-2012 financial officer). Responsible for the network of 4 stations which monitor water temperature and sea-level in the area.

PUBLICATIONS LIST

The list of publications includes 40 papers in international journals, 100 papers in international conferences, 16 papers in national conferences, 11 Books/book chapters, and one patent.

A. Ph. D. Thesis

Laopoulos Th. "A Speed Control Configuration for DC Motors based on the Phase Locked Loop Principle", *Doctoral Dissertation Thesis (PhD)*, Physics Department, Aristotle University of Thessaloniki, Greece, 1989 (in Greek language)

B. Papers published in International Journals

- JP-1. Laopoulos Th. and Karybakas C.A., "Sample and hold phase-frequency detector for phase locked loop motor control systems", *International Journal of Electronics*, Vol.59, N.2, 1985
- JP-2. Laopoulos Th. and Karybakas C.A., "A phase locked motor speed control system with a sample and hold phase detector", *IEEE Trans. Industrial Electronics*, Vol.35, N.2, 1988
- JP-3. Karybakas C.A. and Laopoulos Th., "Fast measuring frequency-to-voltage convertor with DC output", *Electronics Letters*, Vol.25, N.15, 1989
- JP-4. Laopoulos Th. and Karybakas C.A., "High performance frequency-to-voltage converter", *International Journal of Electronics*, Vol.68, N.2, 1990
- JP-5. Laopoulos Th. and Karybakas C.A., "A simple analog division scheme", *IEEE Trans. Instrumentation and measurement*, Vol.40, N.4, 1991
- JP-6. Siskos S. and Laopoulos Th., "Analogue CMOS time measuring circuit for low frequency instrumentation", *Electronics Letters*, Vol.27, N.24, 1991.
- JP-7. Karybakas C.A., Kosmatopoulos C. and Laopoulos Th., "Improved temperature compensation of O.T.A.s", *Electronics Letters*, Vol. 28, N.8, 1992.
- JP-8. Laopoulos Th., Kosmatopoulos C. and Karybakas C.A., "Analogue divider/multiplier for low frequency applications", *International Journal of Electronics*, Vol.73, N.6, 1992.
- JP-9. Karybakas C.A., Siskos S. and Laopoulos Th., "A novel, compensated, tunable current conveyor", *Journal of Circuit, Systems and Computers*, Vol.2, N.4, 1992
- JP-10. Laopoulos Th., Siskos S., Bafleur M. and Givelin Ph., "CMOS Current Conveyor", *Electronics Letters*, Vol.28, N.24, 1992
- JP-11. Laopoulos Th., Tsiolis A. and Karybakas C.A., "Digital conversion of frequency to voltage", *International Journal of Electronics*, Vol.77, N.2, 1994
- JP-12. Laopoulos Th., Siskos S., Bafleur M., Givelin Ph., Tournier E., "Design and applications of an easily integrable CMOS operational floating amplifier for the Megahertz range", *International Journal of Analog Integrated Circuits and Signal Processing*, Vol.7, N.2, 1995.
- JP-13. Bafleur M., Givelin Ph., Puig-Vidal M., Buxo J., Macary V., Siskos S. and Laopoulos Th., "Cost-effective smart power CMOS DMOS technology: Design of main driving and protection functions", *International Journal of Analog Integrated Circuits and Signal Processing*, Vol.8, N.3, 1995

- JP-14. Givelin Ph., Baffle M., Tournier E., Laopoulos Th. and Siskos S., "Application of a CMOS current mode approach to on-chip current sensing in smart power circuits", *IEE Proceedings - Circuits, Devices and Systems*, Vol.142, N.6, 1995
- JP-15. Karybakas C.A. and Laopoulos Th., "Analysis of unlocked and acquisition operation of a phase locked speed control system", *IEEE Trans. Industrial Electronics*, Vol.44, N.1, 1997
- JP-16. Hatzopoulos A.A., Siskos S. and Laopoulos Th., "Current conveyor based test structures for mixed-signal circuits", *IEE Proceedings - Circuits, Devices and Systems*, Vol.144, N.4, 1997
- JP-17. Samitier J., Puig-Vidal M., Bota S., Rubio C., Siskos S. and Laopoulos Th., "A current mode interface circuit for a piezoresistive pressure sensor", *IEEE Trans. Instrumentation and measurement*, Vol.47, N.5, 1998
- JP-18. Vlassis S., Siskos S. and Laopoulos Th., "Pressure sensors interfacing circuit with digital output", *IEE Proceedings - Circuits, Devices and Systems*, Vol.145, N.5, 1998
- JP-19. Laopoulos Th., "Teaching instrumentation and measurement in the complex systems era", *IEEE Instrumentation & Measurement magazine*, Vol.2, N.1, 1999
- JP-20. Nikolaidis S. and Laopoulos Th., "Instruction-Level Power Consumption Estimation of Embedded Processors for Low-Power Applications", *Computers, Standards and Interfaces*, Vol.24, N.4, 2002
- JP-21. Laopoulos Th., Neofotistos P., Kosmatopoulos C., and Nikolaidis S., "Measurement of Current Variations for the Estimation of Software-related Power Consumption", *IEEE Transactions on Instrumentation and Measurement*, Vol.52, N.4, 2003
- JP-22. Papageorgiou Ch. and Laopoulos Th., "Self-Calibration of Ultrasonic Transducers in an Intelligent Data Acquisition System", *International Scientific Journal of Computing*, Vol.2, N.2, 2003
- JP-23. Kavvadias N., Neofotistos P., Nikolaidis S., Kosmatopoulos C., and Laopoulos Th., "Measurements Analysis of the Software-Related Power Consumption of Microprocessors", *IEEE Transactions on Instrumentation and Measurement*, Vol.53, N. 4, 2004
- JP-24. Nikolaidis S., Kavvadias N., Laopoulos T., Bisdounis L., Blionas S., "Instruction-level energy modeling for pipelined processors", *Journal of Embedded Computing*, N.3, 2005
- JP-25. Nikolaidis S., Chatzigeorgiou A., and Laopoulos Th., "Developing an Environment for Embedded Software Energy Estimation", *Computers, Standards and Interfaces*, Vol.28, N.2, 2005
- JP-26. Zakrzewski J., Domanski W., Chaitas P., and Laopoulos Th., "Improving Sensitivity and Selectivity of SnO₂ Gas Sensors by Temperature Variation", *IEEE Transactions on Instrumentation and Measurement*, Vol.55, N. 2, 2006
- JP-27. Konstantakos V., Kosmatopoulos C., Nikolaidis S., and Laopoulos Th., "Measurement of Power Consumption in Digital Systems", *IEEE Transactions on Instrumentation and Measurement*, Vol.55, N.5, 2006
- JP-28. Bozatzidis A., Anastopoulos A.G., and Laopoulos Th., "Automated Data Acquisition Setup for Interfacial Tension and Capacitance Measurements at Hg-Solution Contacts under LabView Control", *Electroanalysis*, Vol.19, N.16, 2007

- JP-29. Stavrinidis S.G., Deliolanis N.C., Miliou A.N., Laopoulos Th. and Anagnostopoulos A.N., "Internal crisis in a second-order non-linear non-autonomous electronic oscillator", *Chaos, Solitons and Fractals*, Vol.36, 2008
- JP-30. Stavrinidis S.G., Deliolanis N.C., Laopoulos Th., Kyprianidis I.M., Miliou A.N. and Anagnostopoulos A.N., "The intermittent behavior of a second-order non-linear non-autonomous oscillator", *Chaos, Solitons and Fractals*, Vol.36, 2008
- JP-31. Konstandakos V., Chatzigeorgiou A., Nikolaidis S., and Laopoulos Th., "Energy Consumption Estimation in Embedded Systems", *IEEE Transactions on Instrumentation and Measurement*, Vol.57, N.4, 2008
- JP-32. Stavrinidis S.G., Miliou A.N., Laopoulos Th. and Anagnostopoulos A.N., "The intermittency route to chaos of an electronic digital oscillator", *Int. J. on Bifurcation and Chaos*, Vol.18, N.5, 2008
- JP-33. Brufau-Penella J., Tsiakmakis K., Laopoulos Th., and Puig-Vidal M., "Model Reference Adaptive Control for an Ionic Polymer Metal Composite in underwater applications", *Smart Materials and Structures*, Vol.17, N.4, 2008
- JP-34. Tsiakmakis K., Brufau J. Puig-Vidal M. and Laopoulos Th., "A Camera Based Method for the Measurement of Motion Parameters of IPMC Actuators", *IEEE Transactions on Instrumentation and Measurement*, Vol.58, N.8, 2009
- JP-35. Stavrinidis S.G., Miliou A.N., Anagnostopoulos A.N., Konstantakos V., Magafas L. and Laopoulos Th., "Desynchronization crisis induced intermittency in a master-slave PLL configuration", *Chaos, Solitons and Fractals*, Vol.42, N.1, 2009
- JP-36. Bolanakis D., Kotsis K., and Laopoulos Th., "Switching from computer to microcomputer architecture education", *European Journal of Engineering Education*, Vol.35, N.1, 2010
- JP-37. Fragopoulou M., Konstantakos V., Zamani M., Siskos S., Laopoulos T. and Sarrabayrouse G., "High sensitivity MOSFET-based neutron dosimetry", *Nuclear Inst. and Methods in Physics Research - A*, Vol. 621, 2010
- JP-38. Psilovikos, A., Sentas, A., Sahanidis, C., Laopoulos, Th., "Trend analysis and assessment of water quality and quantity monitoring data in lignite mines of Western Macedonia, Greece", *Desalination and Water Treatment*, Vol.33 (1-3), 2011
- JP-39. Borovyi, A., Kochan, V., Laopoulos, T., Sachenko, A., "Improved sorting methodology of data-processing instructions", *International Scientific Journal of Computing*, Vol.10, N.1, 2011
- JP-40. Tsiakmakis, K., Laopoulos, T., "An improved tracking technique for visual measurements of ionic polymer-metal composites (IPMC) actuators using Compute Unified Device Architecture (CUDA)", *Measurement Science and Technology*, Vol.22, N.11, 2011

C. Papers published in Proceedings of International Conferences

- CP-1. Laopoulos Th. and Karybakas C.A., "Speed adaptive phase locked scheme for DC motor speed control", *IEEE Intern. Workshop on Intelligent Motion Control*, Istanbul, Turkey, 1990
- CP-2. Konstadakelis C., Siskos S., and Laopoulos Th., "A Fast, Versatile, CMOS Time-to-Voltage Converter", *Mediterranean Electrotechnical Conference - MELECON'91*, Ljubljana, Yugoslavia, 1991.

- CP-3. Laopoulos Th., Tsiolis A., and Karybakas C.A., "High performance speed monitoring circuit", *Intern. Workshop on Motion Control for Intelligent Automation*, Perugia, Italy, 1992
- CP-4. Givelin Ph., Bafleur M., Laopoulos Th., and Siskos S., "On-chip overcurrent and openload detection for a power MOS high-side switch: A CMOS current mode approach", *European Power Electronics Conference - EPE'93*, Brighton, U.K., 1993
- CP-5. Stavrinides S. and Laopoulos Th., "Analog multiplication and division scheme based on D/A converters", *Mediterranean Electrotechnical Conference - MELECON'94*, Antalya, Turkey, 1994
- CP-6. Papazoglou C., Siskos S., Laopoulos Th., and Karybakas C. A., "A current mode CMOS F / V converter for low frequency applications", *IEEE International Symposium on Industrial Electronics - ISIE'95*, Athens, Greece, 1995
- CP-7. Zachos N., Kosmatopoulos C. and Laopoulos Th., "A wireless network of remote measuring stations: Application in water level monitoring", *IEEE International Symposium on Industrial Electronics - ISIE'95*, Athens, Greece, 1995
- CP-8. Siskos S., Laopoulos Th., Verikoukis Ch. and Karybakas C. A., "Integrable bias circuit for temperature compensation of OTAs", *European Conference on Circuit Theory and Design - ECCTD'95*, Istanbul, Turkey, 1995
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E.3. Patent

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