

CURRICULUM VITAE



Georgios (George) K. Fourlas, Ph.D.
Professor
Department of Computer Science and Telecommunications
University of Thessaly

Physicist

M.Sc. (D.E.A.) in Control of Industrial Processes
Ph.D. in Fault Diagnosis of Hybrid Control Systems

PERSONAL INFORMATION

Name: Georgios (George) K. Fourlas
Office Address: Department of Computer Science and Telecommunications, University of Thessaly, 3rd Km Old National Road Lamia-Athens, Lamia, C.P. 35132, Greece
Office Phone: +30-22310-60186
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URL: <http://cs.uth.gr/en/faculty-members/>
Google Scholar Page: <https://scholar.google.gr/citations?user=53uPQI0AAAAJ>

Biography Listings

- Marquis *Who's Who in the World*, 23th Edition.

EDUCATION

03/11/2003: National Technical University of Athens (NTUA), Greece
Mechanical Engineering Department
Ph.D., “Fault Diagnosis of Hybrid Control Systems”

08/07/1993: University Paris XII – Val de Marne, France
M.Sc. – D.E.A., “Sciences Physiques pour l’Ingénieur – Contrôle et Conduite de Processus Industriels”

25/06/1991: University of Patras, Greece
B.S. degree in Physics

6/1985: 2nd Senior High School of Lamia, Greece
High School Graduation Certificate

PROFESSIONAL APPOINTMENTS

Professor: School of Science / Department of Computer Science and Telecommunications, University of Thessaly, (11/01/2022 – since present time).

Associate Professor: School of Science / Department of Computer Science and Telecommunications, University of Thessaly, (27/02/2020 – 10/01/2022).

Associate Professor: General Department of Lamia, University of Thessaly (29/01/2019 – 28/02/2020).

- Associate Professor:** Department of Computer Engineering (former Department of Informatics and Computer Technology), Technological Education Institute (T.E.I.) of Sterea Ellada (former Technological Institute – T.E.I. of Lamia) (5/10/2016 – 28/01/2019).
- Assistant Professor:** Department of Computer Engineering (former Department of Informatics and Computer Technology), Technological Education Institute (T.E.I.) of Sterea Ellada (former Technological Institute – T.E.I. of Lamia) (25/12/2012 – 4/10/2016).
- Lecturer:** Department of Informatics and Computer Technology, Technological Educational Institute (T.E.I.) of Lamia, Greece (29/09/2005 – 24/12/2012).
- Adjunct Lecturer:** Department of Computer Science, University of Thessaly, Lamia, Greece (from 01/10/2015 – 28/02/2016, 01/10/2016 – 28/02/2017, 01/10/2017 – 28/02/2018, 01/10/2018 – 28/02/2019).
- Adjunct Assistant Professor:** Department of Informatics with Applications in Biomedicine, University of Central Greece, Lamia, Greece (from 01/10/2004 – 31/07/2013).
- Adjunct Lecturer/ Assistant Professor:** Department of Informatics and Computer Technology, Technological Educational Institute (T.E.I.) of Lamia, Greece (19/02/2001 – 24/06/2005).
- Adjunct Lecturer/ Assistant Professor:** Department of Electronics, Technological Educational Institute (T.E.I.) of Lamia, Greece (29/09/1999 – 28/06/2004).
- Researcher:** SUP'91 Centre de Recherche et de Formation en Etudes Supérieures, Evry-France (01/02/1994 – 31/03/1994, Fixed-term contract).

ADMINISTRATIVE, MANAGEMENT AND LEADERSHIP EXPERIENCE

- 15/06/2020 – present time:** *Head* of Department of Computer Science and Telecommunications, University of Thessaly
- 30/11/2020 – present time:** *Director* of the Postgraduate Programme in “Autonomous Systems and Robotics” Head of Department of Computer Science and Telecommunications, University of Thessaly
- 3/12/2020 - present time:** *Director* of Robotics and Automatic Control Laboratory, University of Thessaly.
- 29/01/2019 – 31/08/2020:** *Director* of Automatic Control, Robotics and Embedded Systems Laboratory, University of Thessaly.
- 17/05/2018 – 28/01/2019:** *Director* of Automatic Control, Robotics and Embedded Systems Laboratory, Department of Computer Engineering, Technological Education Institute (T.E.I.) of Sterea Ellada, Lamia, Greece.
- 1/04/2017 – 28/01/2019:** *Deputy Head*, Department of Computer Engineering, Technological Education Institute (T.E.I.) of Sterea Ellada.
- 20/07/2017 – 28/01/2019:** *Head* of Industrial Automation and Robotics Institute, Centre for Technological Research of Central Greece, Lamia, Greece.

11/09/2008 – 31/08/2010: *Head* of Informatics and Computer Technology Department, Technological Educational Institute (T.E.I.) of Lamia, Greece.

01/09/2007 – 31-08-2010: Member of the Research and Education Committee of TEI of Lamia.

TEACHING ACTIVITY

Courses Taught

Associate Professor – Department of Computer Science and Telecommunications, University of Thessaly

- **2020-2021 & 2021-2022** **Fall Semester**
 1. Sensors Systems
- **2020-2021 & 2019-2020** **Spring Semester**
 1. Automatic Control Systems

Associate Professor – General Dep. of Lamia, University of Thessaly, Greece.

- **2019-2020 & 2018-2019** **Fall Semester**
 1. Measurement Systems (Theory & Lab)
 2. Digital Systems II (Theory & Lab)
- **2019-2020 & 2018-2019** **Spring Semester**
 1. Automatic Control Systems (Theory & Lab)
 2. Microprocessors-Microcontrollers (Theory & Lab)

Associate Professor – Dep. of Computer Engineering, Technological Education Institute of Central Greece.

- **2018-2019 & 2017-2018 & 2016-2017** **Fall Semester**
 1. Measurement Systems (Theory & Lab)
 2. Digital Systems II (Theory & Lab)
 3. Introduction to Robotics (Lab)
- **2017-2018 & 2016-2017** **Spring Semester**
 1. Automatic Control Systems (Theory & Lab)
 2. Microprocessors-Microcontrollers (Theory & Lab)

Assistant Professor – Dep. of Computer Engineering, Technological Education Institute of Central Greece.

- **2015 – 2016** **Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems II (Theory & Lab)**Spring Semester**
 1. Automatic Control Systems (Theory & Lab)
 2. Microprocessors-Microcontrollers (Theory & Lab)
- **2014 – 2015** **Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems II (Theory)**Spring Semester**
 1. Digital Systems I (Theory)
 2. Automatic Control Systems (Theory & Lab)
- **2013 – 2014** **Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems II (Theory)**Spring Semester**
 1. Digital Systems I (Theory)
 2. Automatic Control Systems (Theory & Lab)
- **2012 – 2013** **Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Automatic Control Systems (Theory & Lab)**Spring Semester**
 1. Automatic Control Systems (Theory & Lab)

Lecturer – Department of Informatics and Computer Technology, Technological Educational Institute of Lamia, Greece.

- **2011 – 2012**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Automatic Control Systems (Theory & Lab)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Automatic Control Systems (Theory & Lab)
- **2010 – 2011**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Automatic Control Systems (Theory & Lab)
- **2009 – 2010**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Lab)
 2. Digital Systems I (Theory)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Lab)
 2. Digital Systems I (Theory)
- **2008 – 2009**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Lab)
 2. Digital Systems I (Theory)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Lab)
 2. Digital Systems I (Theory)
- **2007 – 2008**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory & Lab)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory & Lab)
- **2006 – 2007**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory & Lab)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory & Lab)
- **2005 – 2006**
 - Fall Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory & Lab)
 - Spring Semester**
 1. Microprocessors-Microcontrollers (Theory & Lab)
 2. Digital Systems I (Theory & Lab)

Adjunct Lecturer – Department of Computer Science, University of Thessaly, Lamia, Greece.

- **2018 – 2019,**
 - Fall Semester**
 1. System Analysis (Theory)
 2. Electrical Circuits & Electronics (Theory)
- **2017 – 2018,**
- **2016 – 2017,**
- **2015 – 2016**

Adjunct Assistant Professor – Department of Informatics with Applications in Biomedicine, University of Central Greece, Lamia, Greece.

- **2012 – 2013**
 - Spring Semester**
 1. System Analysis (Theory & Lab)
- **2011 – 2012**
 - Spring Semester**
 1. Automatic Control Systems and Applications in Biomedicine (Theory)

- **2010 – 2011** **Spring Semester**
1. Automatic Control Systems and Applications in Biomedicine (Theory)
- **2009 – 2010** **Fall Semester**
1. Introduction to Programming (Lab)
Spring Semester
1. Automatic Control Systems and Applications in Biomedicine (Theory)
- **2008 – 2009** **Fall Semester**
1. Introduction to Programming (Lab)
Spring Semester
1. Automatic Control Systems and Applications in Biomedicine (Theory)
- **2007 – 2008** **Fall Semester**
1. Introduction to Programming (Lab)
Spring Semester
1. System Analysis (Theory)
2. Automatic Control Systems and Applications in Biomedicine (Theory)
- **2006 – 2007** **Fall Semester**
1. Introduction to Programming (Lab)
2. Principles of Programming Languages (Theory & Lab)
Spring Semester
1. Logical Design (Lab)
2. System Analysis (Lab)
- **2005 – 2006** **Fall Semester**
1. Introduction to Programming (Lab)
Spring Semester
1. Logical Design (Lab)
- **2004 – 2005** **Fall Semester**
1. Introduction to Programming (Lab)
Spring Semester
1. Logical Design (Lab)
2. Object Oriented Programming (Lab)

Adjunct Lecturer/Assistant Professor – Department of Informatics and Computer Technology, Technological Educational Institute (T.E.I.) of Lamia, Greece.

- **2001 – 2005**
 1. Computers Architectures (Theory & Lab)
 2. Microprocessors-Microcontrollers (Theory & Lab)
 3. Linear Systems – Linear Transformations (Lab)
 4. Digital Signal Processing (Lab)
 5. Digital Systems I (Theory)
 6. Digital Systems II (Theory)

Adjunct Lecturer/Assistant Professor – Department of Electronics, Technological Institute (T.E.I.) of Lamia, Greece.

- **1999 – 2000**
 1. Electrical Measurements (Theory)
 2. Automatic Control Systems I (Theory & Lab)
 3. Microcomputers II (Theory)
 4. Electrical Circuits & Electronics (Theory)
 5. Microprocessors-Microcontrollers (Theory)
 6. Microcomputers Applications (Theory)
 7. Automatic Control Systems II (Theory)

Supervised Thesis

- PhD advising:

I'm advisor to a doctoral thesis entitled "Fault Diagnosis and Accommodation Methods for Underwater Robotic Vehicles" of a PhD Student, at the Department of Computer Science and Telecommunications, University of Thessaly, Greece

- Master's advising: graduated 3 MS student, currently advising 1 student
- Diploma advising: graduated >150 Diploma students, currently advising 10 Diploma students

I have supervised a large number of Diploma Thesis both at the Department of Computer Engineering (former Department of Informatics and Computer Technology) and the Department of Electronics as well as at the Department of Informatics with Applications in Biomedicine.

Contribution to Lab Development

Organization and first operation of the following labs at the Department of Computer Engineering (former Department of Informatics and Computer Technology):

- Measurement Systems
- Introduction to Robotics
- Automatic Control Systems
- Microprocessors-Microcontrollers

RESEARCH INTEREST

My research interest is mainly focused on:

- Control & Automation
- Failure Diagnosis
- Robotics
- Autonomous Systems
- Fault Diagnosis and Fault Tolerance of Hybrid Systems
- Failure Detection, Isolation and Accommodation
- Reliability Analysis
- Air Traffic Management Systems
- Hybrid Control Systems
- Embedded Systems and Microcontrollers
- Power Systems

Research Related Activities

- Member of the American Institute of Aeronautics and Astronautics – AIAA
 - Editorial Board Member of the Advances in Robotics & Automation Journal
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- Reviewer of the «IEEE Transactions on Automation Science and Engineering»
 - Reviewer of the «IEEE Transactions on Systems, Man, and Cybernetics: Systems»
 - Reviewer of the «International Journal of Production Research», Taylor & Francis
 - Reviewer of the «Transactions of the Institute of Measurement and Control», SAGE
 - Reviewer of the «International Journal of Robotics and Automation», ACTA Press
 - Reviewer of the «Journal of Control Science & Engineering», Hindawi
 - Reviewer of the «Asian Journal of Control», Wiley
 - Reviewer of the «International Journal of Information Science», Scientific & Academic Publishing, USA
 - Reviewer of the «Journal of Marine Science and Engineering» MDPI
 - Reviewer of the «Symmetry», MDPI
 - Reviewer of the «Processes», MDPI
 - Reviewer of the «Applied Sciences», MDPI

- Reviewer of the «Robotics», MDPI
- Reviewer of the «Sensors», MDPI
- Reviewer of the «Multimodal Technologies and Interaction», MDPI
- Reviewer of the «IEEE Transactions on Robotics»

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- Reviewer of the *IEEE Conference on Decision & Control 2020 – CDC20*, December 8-11, 2020, Jeju Island, Republic of Korea
 - Reviewer of the *International Conference on Unmanned Aircraft Systems, ICUAS'21*, June 15-18, 2021, Athens, GREECE
 - Reviewer of the *European Control Conference 2019*, June 25 - 28, 2019, Naples, Italy
 - Reviewer of the *4th International Conference on Control and Fault-Tolerant Systems (SYSTOL)*, September 18-20th, 2019, Casablanca, Morocco
 - Reviewer of the *European Control Conference 2018*, June 12 - 15, 2018, Limassol, Cyprus
 - Reviewer of the *European Control Conference 2015 - ECC'15*, Linz, Austria
 - Reviewer of the *2014 IEEE International Conference on Robotics and Automation (ICRA'14)*, May 31 to June 5, 2014, Hong Kong, China
 - Reviewer of the *2014 IEEE Multi-Conference on Systems and Control*, 2014, Antibes Congress Center, Nice/Antibes, France
 - Reviewer of the *22th IEEE Mediterranean Conference on Control and Automation (MED '14)*, June 16-19, 2014, Palermo, Italy
 - Reviewer of the *European Control Conference 2013 - ECC'13*, Zurich, Switzerland
 - Reviewer of the *21th IEEE Mediterranean Conference on Control and Automation (MED '12)*, June 25-28, 2013, Platania-Chania, Crete, Greece
 - Reviewer of the *20th IEEE Mediterranean Conference on Control and Automation (MED '12)*, July 3-6, 2012, Barcelona, Spain
 - Reviewer of the *2011 Australian Control Conference (AUCC 2011)*, Melbourne, Australia
 - Reviewer of the *IEEE Conference on Decision & Control 2009 – CDC09*, Shanghai, China
 - Reviewer of the *European Control Conference 2009 - ECC'09*, Budapest, Hungary
 - Reviewer of the *IEEE Conference on Decision & Control 2008 – CDC08*, Cancun, Mexico
 - Reviewer of the *European Control Conference 2007, July 2-5, 2007*, Kos, Greece,
 - Reviewer of the *IEEE Conference on Decision & Control 2007 – CDC07*, New Orleans, USA
 - Reviewer of the *13th IEEE Mediterranean Conference on Control and Automation*, June 27-29, 2005, Cyprus

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- **Session Chair** at *2021 International Conference on Unmanned Aircraft Systems, ICUAS'21*, June 15-18, 2021, Athens, GREECE
 - **Session Chair** at the *IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2014, Bali, Indonesia 5 – 10/12, 2014
 - **Session Chair** at the *IEEE International Conference on Industrial Technology (ICIT 2014)*, Busan, Korea, February 26 - March 1, 2014
 - **Session Chair** at the *21st IEEE Mediterranean Conference on Control and Automation*, June 25-28, Greece, 2013
 - **Session Chair** at the *European Control Conference 2007*, Kos, Greece, July 2-5, 2007
 - **Session Co-Chair** at the *13th IEEE Mediterranean Conference on Control and Automation*, June 27-29, Cyprus, 2005
 - **Session Co-Chair** at the *2005 IEEE Conference on Control Applications*, Toronto, Canada, August 28-31, 2005

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- **Local Arrangements Chair** at *30th IEEE Mediterranean Conference on Control and Automation (MED '22)*, June 28-July 1, 2022, Athens, GREECE
 - **Local Arrangements Chair** at *2021 International Conference on Unmanned Aircraft Systems, ICUAS'21*, June 15-18, 2021, Athens, GREECE

- **Advisory Committee** at 2020 International Conference on Unmanned Aircraft Systems, ICUAS'20, September 1-4, 2020, Athens, GREECE
- **Publication Chair** at 20th IEEE Mediterranean Conference on Control and Automation (MED '16), June 21-24, 2016, Athens, GREECE
- **Associate Editor (AE)** for the Conference Editorial Board (CEB) of the 21st IEEE Mediterranean Conference on Control and Automation, June 25-28, Greece, 2013
- **Member of the International Program Committee** of the 13th IEEE Mediterranean Conference on Control and Automation, June 27-29, Cyprus, 2005

RESEARCH PROJECTS

- 22/02/2021 – 22/10/2021:** Member of the Main Research Team of the Applied Research Project entitled: "Intelligent Management of Waste Disposal of The Municipality of Lamia Through Innovative Methods". Awarded Amount **73.439€**.
- 08/09/2012 – 30/11/2015:** Member of the Main Research Team of the project entitled "STHENOS: interdisciplinary research in affective computing for biological activity recognition in assistive environments". Research program «Thalis» funded by grants from the European Social Fund (ESF) and the Ministry of Education, Lifelong Learning & Religious Affairs through the operational program «Education and Lifelong Learning». The aim of this project was to support aged people and patients with Alzheimer's or depression by a system that will recognize their emotional state and provide them with personalized computer interfaces targeting the enhancement of their everyday life through avoiding negative emotional states and exercise their attention. Besides, this home-care system will be also able to identify an urgent situation, e.g., a fall and inform the supervisors of relatives of the person, as well as evaluate the treatment of a patient with emotional disorders. Awarded Amount **512.821€**.
- 01/07/2012 – 30/11/2015:** Project Leader – Principal Investigator of the project entitled "DIAGNOR: fault DIAGnosis and accommodation of wheeled mObile Robots". Research program «Archimedes III» funded by grants from the European Social Fund (ESF) and the Ministry of Education, Lifelong Learning & Religious Affairs through the operational program «Education and Lifelong Learning». The objective of the project was to develop initially the methodology that will allow us to detect faults that will appear so much in the sensors as well as in the actuators. We also studied the reliability, availability and maintainability of a wheeled mobile robot. Following we developed a methodology that will allow faults accommodation in sensors and actuators to ensure the reliability and robustness of the system. The validation of methodologies was realized experimentally using wheeled robots. Awarded Amount **100.000€**.
- 01/07/2012– 30/06/2015:** Member of the Main Research Team of the project entitled "VIOMGR: Cross-Cultural Validation of International Outcome Measures-questionnaires In Greek and Construction of Electronic Database". Research program «Archimedes III» funded by grants from the European Social Fund (ESF) and the Ministry of Education, Lifelong Learning & Religious Affairs through the operational program «Education and Lifelong Learning». The main aim of the study was to intercultural adaptation of a set of questionnaires to assess the functionality of patients widely used internationally and to create an electronic database accessible to members of the wider Scientific Community to facilitate their distribution and use in Greece, while ensuring that the modified instruments are equivalent to their original form. Awarded Amount **100.000€**.
- 01/04/2011 – 13/11/2015:** Participation in a program entitled "Practical Internship of Students of TEI of Lamia", funded by grants from the European Social Fund (ESF) and the Ministry

of Education, Lifelong Learning & Religious Affairs through the operational program «Education and Lifelong Learning».

- 01/04/2011 – 30/09/2013:** Project and Scientific Coordinator of the project entitled “Innovation and Entrepreneurship Unit” TEI of Lamia, part of the Operational Programme for Education and Lifelong Learning in Greece, Awarded Amount **140.000€**.
- 11/01/2008 – 30/04/2008:** Principal Investigator in a research program entitled “Professional guide for graduates of Informatics and Computer Technology”, TEI of Lamia, under the framework of EPEAEK-II supported by European Community and Greek Ministry of Education.
- 01/01/2006 – 30/09/2008:** Participation in a research program entitled “Practical Internship”, TEI of Lamia, under the framework of EPEAEK-II supported by European Community and Greek Ministry of Education.
- 28/11/2005 – 31/08/2008:** Member of Scientific Committee in a research program entitled “Supporting Studies in Informatics”, TEI of Lamia, under the framework of EPEAEK.II supported by European Community and Greek Ministry of Education, Awarded Amount **860.000€**.
- 12/2004 – 06/2006:** Researcher in cooperation with Prof. John Lygeros, University-ETH Zurich, Switzerland, to the research project entitled “Towards a Next Generation ATM System: Model Based Conflict Detection and Resolution”, Eurocontrol Experimental Center, C20051E/BM/03.
- 01/03/2002 – 31/10/2002:** Researcher to the research project entitled “MICRON: MIniature Co-operative RObots advancing towards the Nano-range”, IST-2001-33567 (Future and Emerging Technologies). MiCRoN aims at bridging the micro and the nano worlds by developing a prototype of a multi-microrobot manipulating system to handle μm -sized and mesoscopic objects with nanometre precision. The system will be based on a cluster (5 to 10) of small (cm^3) mobile robots each equipped with onboard electronics for control and communication. These robots will be able to co-operate autonomously in order to accomplish tasks ranging from the handling of biological cells to the assembly of micro-parts. Advanced novel tools as well as SPM probes will be integrated in the robot platform. Selected wireless robots will be equipped with CMOS cameras to provide live high-magnification scene images that will be fed to an integrated machine vision system for scene interpretation. Several other subsystems will also be developed, such as a global positioning system and a wireless power supply unit. The objective of the proposed project is the development of a multi-microrobot manipulating system to handle μm -sized objects as well as smaller nano-scale objects. Awarded Amount **250.000€**.
- 01/06/2000 – 30/04/2002:** Principal Investigator to the research project entitled “A Hybrid Systems Approach for Power Systems Analysis”, ICCS-NTUA, (National). In this project a framework for modeling power systems using Hybrid Input/Output Automata (HIOA) is proposed. The system is assumed to consist of several distinct components. Some of them drive the continuous dynamics while others exhibit event-driven discrete dynamics. Such behavior is characterized by interactions between continuous dynamics and discrete events. Therefore, the power systems are an important example of hybrid systems. This hybrid modeling process is applied to a simple power system. Awarded Amount **15.000€**.
- 20/09/1993 – 30/11/1993:** Principal Investigator to the research project “Study of Functional Stability of a Valve: Elements of Modeling” n° DMT/92-19, in collaboration with C.E.A. (Commissariat of Atomic Energy), Saclay, France and the company SEGAULT,

France. The project concerns the use of security valves for nuclear reactors of submarines.

PUBLICATIONS

Overview

Publications in international peer reviewed journals	11
Publications at international conferences, published in full in proceedings	36
Publications in Greek conferences	1
Total of Publications	48
Books	2
Book Chapter	1
Patents	1

Thesis

1. George K. Fourlas, “Fault Diagnosis of Hybrid Control Systems”, Ph.D. Thesis, Athens, Greece, 2003.
2. George K. Fourlas, “Etude de la Stabilité Fonctionnelle d'un Clapet”, Master Thesis, Paris, France, 1993.
3. George K. Fourlas, “Ion implementation”, Diploma Thesis, Patra, Greece, 1991.

Patents

Greek Patent

No: 1006243
Inventors: **George Fourlas**
John Lygeros
Int Cl⁸: G08G 5/00
Title: ***Detection Method of Aircraft Divergence from its Flight Plan***
Date of deposit: 26-11-2007
Date of Patent: 23-01-2009

Books

George K. Fourlas, “Applied Control: Principles, Analysis and Development with Matlab, Simulink and LabVIEW” (in Greek), Editions Tziola, 2016, ISBN: 978-960-418-579-5.

George K. Fourlas, “The PIC16F84A Microcontroller: *architectural features & programming*” (in Greek), 2010, Self-edition, ISBN 978-960-93-1933-1.

Book Chapter

K. Kalovrektis, N. Katevas, “Measurement and control sensors”, **Chapter 35** “Introduction to Simulink for modeling and simulation systems” (in Greek), Editions Tziola, 2011, ISBN 978-960-418-836-9.

Journals

- [11] George C. Karras, Charalampos P. Bechlioulis, **George K. Fourlas**, Kostas J. Kyriakopoulos. «A Mixed Initiative Formation Control Strategy for Multiple Quadrotors», *Robotics*, 2021, 10(4), 116; MDPI <https://doi.org/10.3390/robotics10040116>.
- [10] **George K. Fourlas** and George Karras, “A Survey on Fault Diagnosis and Fault Tolerant Control Methods for UAVs”, *Machines*, 2021, 9(9), 197, MDPI; <https://doi.org/10.3390/machines9090197>.
- [9] George Karras, **George K. Fourlas**. “Model Predictive Fault Tolerant Control for Omni-directional Mobile Robots”, *J Intell Robot Syst* **97**, 635–655 (2020), <https://doi.org/10.1007/s10846-019-01029-7>
- [8] P.H. Tsarouhas, **G.K. Fourlas**, “Mission reliability estimation of mobile robot system”, *International Journal of Systems Assurance Engineering and Management*, Springer, Volume 7, Issue 2, pp 220-228, 2016.
- [7] P.H. Tsarouhas, **G.K. Fourlas**, “Reliability and maintainability analysis of a robotic system for industrial applications: a case study”, *International Journal of Performability Engineering*, Vol. 11, No. 5, September 2015, pp. 453-462.
- [6] **George K. Fourlas**, “An Approach Towards Fault Tolerant of Model Based Hybrid Control Systems”, *International Journal of Applied Systemic Studies*, 5:3: 199-214, 2014.
- [5] **G.K. Fourlas**, K. Kalovrektis, E. Fountas, “Application of Robot Formation Scheme for Screening Solar Energy in a Greenhouse”, *International Journal of Applied Science Engineering and Technology*, vol.5:2, pp. 109-115, 2009.
- [4] **G.K. Fourlas**, K.D. Vournas, K.J. Kyriakopoulos, “Hybrid Systems Modeling for Power Systems”, *IEEE Circuit & Systems Magazine*, vol.4, issue 3, pp. 16-23, 2004.
- [3] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “A general Framework for Model Based Fault Detection of Hybrid Systems”, *Asian Journal of Information Technology*, 3(7): 574-582, 2004.
- [2] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “Contribution to the Model Based Fault Detection of Hybrid Systems”, *Asian Journal of Information Technology*, 3(7): 566-573, 2004.
- [1] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “Model Based Fault Diagnosis of Hybrid Systems Based on Hybrid Structure Hypothesis Testing”, *Journal of Applied Systems Studies*, vol. 4 (3), 2003.

Conferences

- [C36] **George K. Fourlas** and George Karras, “A Survey on Fault Diagnosis Methods for UAVs”, *2021 International Conference on Unmanned Aircraft Systems, ICUAS’21*, June 15-18, 2021 Athens, Greece.
- [C35] George Karras, Charalampos P. Bechlioulis, **George K. Fourlas** and Kostas J. Kyriakopoulos, “Formation Control and Target Interception for Multiple Multi-rotor Aerial Vehicles”, *2020 International Conference on Unmanned Aircraft Systems, ICUAS’20*, September 1-4, 2020 Athens, Greece.
- [C34] George Karras, Charalampos P. Bechlioulis, **George K. Fourlas** and Kostas J. Kyriakopoulos, “Target Tracking with Multi-rotor Aerial Vehicles based on a Robust Visual Servo Controller with Prescribed Performance”, *2020 International Conference on Unmanned Aircraft Systems, ICUAS’20*, September 1-4, 2020 Athens, Greece.
- [C33] Andreas Nioras, George C. Karras, **George K. Fourlas** and George Stamoulis, “Survey of fault

diagnosis and accommodation of unmanned underwater vehicles”, in *29th International Workshop on Principles of Diagnosis DX'18*, 27-30 August 2018, Warsaw, Poland.

- [C32] Panagiotis Vlantis, Charalampos P. Bechlioulis, George Karras, **George Fourlas** and Kostas J. Kyriakopoulos, “Fault Tolerant Control for Omni-directional Mobile Platforms with 4 Mecanum Wheels” *IEEE International Conference on Robotics and Automation (ICRA)*, Stockholm, Sweden, May 16-21, 2016.
- [C31] P.H. Tsarouhas, **G.K. Fourlas**, “Maintainability analysis of mobile robot” *16th IEEE International Symposium on Computational Intelligence and Informatics*, Budapest, Hungary, November 19-21, 2015.
- [C30] Michalis Loupis, **Georgios Fourlas**, Petros Lampsas, Theodoros Tsiftsis, Konstantinos Anagnostou, Nikos Strimpakos, Yiannis Raftoyiannis, Anastasia Pantera, Anna Deltsidou, “Archimedes Interdisciplinary Research Programme Forges a Broad Spectrum of Academic Innovations”, *ENTRENOVA 10-11*, Kotor, Montenegro, September 2015.
- [C29] **G.K. Fourlas**, G.C. Karras, K.J. Kyriakopoulos “Fault Tolerant Control for a 4Wheel Skid Steering Mobile Robot”, *26th International Workshop on Principles of Diagnosis (DX'15)*, Paris, France, August 31 to September 3, 2015.
- [C28] **G.K. Fourlas**, G.C. Karras, K.J. Kyriakopoulos, “Sensors Fault Diagnosis in Autonomous Mobile Robots Using Observer - Based Technique” *International Conference on Control, Automation and Robotics (ICCAR 2015)*, Singapore, May 20-22, 2015.
- [C27] **G.K. Fourlas**, “On the application of structural analysis to fault diagnosis of a mobile robot”, *IEEE International Conference on Robotics and Biomimetics (ROBIO)*, 2014, Bali, Indonesia 5 – 10/12, 2014.
- [C26] **G.K. Fourlas**, “Application of Hybrid Systems Multiple Faults Diagnosis to a Four – Wheeled Mobile Robot” *25th International Workshop on Principles of Diagnosis (DX'14)*, Graz, Austria, 8 – 11/9, 2014.
- [C25] **G.K. Fourlas**, I. Maglogiannis, “Human Movement Detection using Attitude and Heading Reference System”, *7th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2014)*, Rhodes, Greece, May 27-30, 2014.
- [C24] P.M. Papazoglou, T. I. Laskari, **G.K. Fourlas** “Towards a Low Cost Open Architecture Wearable Sensor Network for Health Care Applications”, *7th International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 2014)*, Rhodes, Greece, May 27-30, 2014.
- [C23] P.H. Tsarouhas, **G.K. Fourlas**, “Reliability analysis of mobile robot: a case study” *2014 International Conference on Mechanical Engineering (ME '14)*, Venice, Italy, March 15-17, 2014.
- [C22] **G.K. Fourlas**, S. Karkanis, G.C. Karras, K.J. Kyriakopoulos, “Model Based Actuator Fault Diagnosis for a Mobile Robot, *IEEE International Conference on Industrial Technology (ICIT 2014)*, Busan, Korea, February 26 - March 1, 2014.
- [C21] **G.K. Fourlas**, “Theoretical Approach of Model Based Fault Diagnosis for a 4 - Wheel Skid Steering Mobile Robot” *21st IEEE Mediterranean Conference on Control and Automation (MED '13)*, Platania-Chania, Crete, GREECE, June 25-28, 2013.
- [C20] **G.K. Fourlas**, “Fault Detection Approach for a 4 - Wheel Skid Steering Mobile Robot” *IEEE International Conference on Industrial Technology (ICIT 2013)*, Cape Town, South Africa, February 25-27, 2013.
- [C19] C. Liolios, C. Doukas, **G. Fourlas**, I. Maglogiannis, “An Overview of Body Sensor Networks in Enabling Pervasive Healthcare and Assistive Environments”, *3rd International Conference on Pervasive Technologies Related to Assistive Environments (PETRA 10)*, Samos, Greece, June 23-25, 2010.
- [C18] **G.K. Fourlas**, “A Theoretical Multiple Faults Diagnosis Approach of Hybrid Systems Applied to a Two Tank System”, *7th IEEE International Conference on Control & Automation (ICCA'09)*, Christchurch, New Zealand, December 9-11, 2009.

- [C17] **G.K. Fourlas**, “Contribution to the Fault Tolerance for Hybrid Control Systems with Multiple Faults”, *7th IFAC Symposium on Fault Detection, Supervision and Safety of Technical Processes, SafeProcess 2009*, Barcelona, Spain, 30/6 – 3/7, 2009.
- [C16] **G.K. Fourlas**, “Multiple Faults Diagnosability of Hybrid Systems”, *17th IEEE Mediterranean Conference on Control and Automation*, Thessaloniki, Greece, June 24-26, 2009.
- [C15] **G.K. Fourlas**, “Multiple Faults Diagnosability Criteria in Hybrid Control Systems”, *20th International Workshop on Principles of Diagnosis (DX09)*, Stockholm, Sweden, 14/6 – 17/6, 2009.
- [C14] **G.K. Fourlas**, J. Lygeros, “Detection of aircraft divergence from its flight plan in the vertical plane”, *46rd IEEE Conference on Decision Control*, New Orleans, Louisiana, USA, December 12-14, 2007.
- [C13] **G.K. Fourlas** “Threshold Selection in Diagnosis Approach Applied to a Power System”, *European Control Conference 2007*, Kos, Greece, July 2-5, 2007.
- [C12] **G.K. Fourlas** “An Approach Towards Fault Tolerant Hybrid Control Systems”, *15th IEEE Mediterranean Conference on Control and Automation*, Athens, Greece, June 27-29, 2007.
- [C11] **G.K. Fourlas**, J. Lygeros, “Detection of Flight Plan Divergence in the Horizontal Plane” *AIAA Guidance, Navigation, and Control Conference and Exhibit*, Keystone, Colorado, USA, August 21 – 24, 2006.
- [C10] A. Tzanis, G. Delaportas, **G.K. Fourlas**, “Application of a Robotic Arm to an Automated Multi-Recording Process”, *12th IEEE International Workshop of Systems Signal and Image Processing*, Greece, 2005.
- [C9] **G.K. Fourlas**, “Modeling of an Electrical Power Transmission System using Hybrid Systems”, *2005 IEEE Conference on Control Applications*, Toronto, Canada, August 28-31, 2005.
- [C8] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “Fault Diagnosis of Hybrid Systems”, *13th IEEE Mediterranean Conference on Control and Automation*, Limassol, Cyprus, June 27-29, 2005.
- [C7] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “A Theoretical Diagnosis Approach Applied to a Power Transmission System”, *43rd IEEE Conference on Decision Control*, Paradise Island, Bahamas, December 2004.
- [C6] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “Power System Fault Diagnosis Based on Hybrid System Modeling”, *12th IEEE Mediterranean Conference on Control and Automation*, Kusadasi, Turkey, June 2004.
- [C5] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “Model Based Fault Diagnosis of Hybrid Systems Based on Hybrid Structure Hypothesis Testing”, *11th IEEE Mediterranean Conference on Control and Automation*, Ρόδος, Ελλάδα, June 2003.
- [C4] **G.K. Fourlas**, K.D. Vournas, K.J. Kyriakopoulos, “Hybrid Systems Modeling for Power Systems”, *3rd IEE Mediterranean Conference on Power Generation*, Athens, Greece, November 2002.
- [C3] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “Diagnosability of Hybrid Systems”, *10th IEEE Mediterranean Conference on Control and Automation*, Lisbon, Portugal, July 2002.
- [C2] **G.K. Fourlas**, K.J. Kyriakopoulos, N.J. Krikelis, “A Framework for Fault Detection of Hybrid Systems”, *9th IEEE Mediterranean Conference on Control and Automation*, Dubrovnik, Croatia, June 2001.
- [C1] **G. K. Fourlas**, K. J. Kyriakopoulos and N. J. Krikelis “Contribution to the Fault Detection for Hybrid Systems”, *8th IEEE Mediterranean Conference on Control & Automation*, Rio, Patra, Greece, July 2000.

Greek Conferences

- [GC1] p. D. Angelis, I. Hatzilygeroudis, K. Koutsoyiannis, **G. Fourlas**, II. Drakatos, "The Contribution of Fuzzy Logic in Research of Technical Electromagnetic Radiation (C)", *2nd National Conference of Mechanical – Electrical Engineering*, Athens, 16-18 May 2007.

Citations

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<https://scholar.google.gr/citations?user=53uPQI0AAAAJ>

FOREIGN LANGUAGES

- French (*Fluent*)
- English (*Very Good*)
- Greek (*Native*)

COMPUTER SKILLS

- O/S: Windows, Mac, Linux
- Programming languages: C/C++, MATLAB/Simulink, LabVIEW, Fortran, Assembly
- Other: Microsoft Office, Latex, Photoshop, Internet Applications
- Programming: PLC, Microcontrollers