

## Curriculum Vitae

**EVANGELOS KARVOUNIS, M.SC., PH.D.**

**ASSOCIATE PROFESSOR**

**DEPARTMENT OF INFORMATICS, SCHOOL OF SCIENCES**

**UNIVERSITY OF WESTERN MACEDONIA**

**[ekarvounis@uowm.gr](mailto:ekarvounis@uowm.gr)**

**Evaggelos C. Karvounis** was born in Ioannina, Greece, in 1978. He earned a diploma in Computer Science from the Aristotle University of Thessaloniki, Greece, in 2002, followed by a Ph.D. in Biomedical Sciences from the Department of Materials Science and Engineering at the University of Ioannina in 2009. In 2018, he obtained an M.Sc. in Health/Health Care Administration and Management from the University of Macedonia, and in 2020, he earned a second M.Sc. in the Engineering of Pervasive Computing Systems from the Hellenic Open University. He is fluent in English and has been married to Maria Vavva since 2011, with whom he has two children.

Dr. Karvounis has served as an adjunct lecturer and assistant professor at various universities and technology institutes across Greece. In August 2016, he was appointed Manager of the General Hospital of Ioannina. He has contributed to over 20 European and Greek National Research Programs, including those under the 3rd Community Support Framework (CSF), FP6, FP7, and H2020 frameworks. His research interests span a wide range of fields, including digital biomedical signal and image processing, medical informatics, pervasive and ubiquitous computing systems, the Internet of Things (IoT), data mining, hardware engineering, embedded system design and prototyping, decision support systems, as well as modeling and optimization.

**Currently**, Dr. Karvounis holds the position of Associate Professor in the Department of Informatics at the University of Western Macedonia. He is also a Senior Researcher at the Institute of Communication and Computer Systems (ICCS) at the National Technical University of Athens (NTUA). He has authored more than 60 publications in peer-reviewed journals, conference proceedings, and book chapters, and his work has garnered over 1,000 citations.

## PERSONAL INFORMATIONS

## Karvounis C. Evangelos



### **Karvounis Evangelos, M.Sc. Ph.D.**

Associate Professor

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### **Karvounis Evaggelos, M.Sc. Ph.D.**

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tel: +30 26513 61161

mob: +30 6974 492030

## WORK EXPERIENCE

20/09/2001–18/03/2002

### Computer Programmer

**Contracting Entity:** Diams Networks Hellas, Thessaloniki (Greece)

- Development of healthcare and biomedical technology applications.

28/09/2015 – 20/11/2015

### Computer Programmer

**Contracting Authority:** 4th Health District of Macedonia and Thrace, Thessaloniki (Greece)

Project-based contract for the implementation of Deliverables of Actions 2.1, 3.1, and 3.3 of the project "Better HEALTH care in the Bulgarian-Greek cross-border area – BEHEALTH", under the European Territorial Cooperation Programme "Greece – Bulgaria 2007–2013", as a member of a consortium including the company plan02 – Consulting Services Private Company, VAT No. 800549664.

16/06/2020 - 30/09/2020

### Computer Programmer

**Contracting Authority:** Leonidas Psiliakos & Co. Ltd, Athens (Greece)

Project-based contract for the implementation of deliverables within the framework of the project INSPECT: Intelligent Hospital Beds for Patient Care (MIS: T2EDK-03717, Operational Programme Competitiveness, Entrepreneurship and Innovation, National Strategic Reference Framework – NSRF 2014–2020, under the Unified State Aid Action "Research – Create – Innovate"). Executed tasks: Participation in activities of WP1 (T1.1, T1.2).

04/06/2021 - 04/07/2021

### Provision of External Consulting Services

**Contracting Authority:** Municipality of Ioannina, Ioannina (Greece)

Project-based contract for the general service titled "Provision of external consulting services for the project: Consulting services for the preparation and submission of the funding application dossier under Call AT08 of the 'Antonis Tritsis' Programme."

22/10/2024 - Present

### Associate Professor ( Government Gazette of Appointment: 3450/21-10-2024, Issue of Government Appointments (Τ.Γ.) )

Department of Informatics, School of Sciences, University of Western Macedonia (Greece)

## RESEARCHER

01/11/2002–31/12/2002

### University of Ioannina, Research Committee, Ioannina (Greece)

Assignment for the implementation of a project under a research contract within the framework of "TOWARDS A EUROPEAN E-COMMERCE AMBIENT IN THE CRAFT SECTOR" (Code: 31111). Executed task: Design/Implementation of XML Infrastructure.

01/01/2003–31/05/2003

### Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)

Scholarship agreement for the implementation of the project: "System functionality verification", within

the framework of the EU co-funded programme “Citizen Information Tool in Smart Administrations (CITATION).”

- 01/03/2003–30/04/2003 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “CHILDCARE: Intelligent Collaborative Environment for Out-of-Hospital Children Healthcare” (Code: 31185). Executed task: Integration of Telemedicine Services.
- 01/09/2003–31/12/2003 **National and Kapodistrian University of Athens, Research Committee, Athens (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “INFACE: Advanced Visual Interfaces for Timely Retrieval of Patient-Related Information” (IST-2001-37187). Executed task: Intercommunication Security and Privacy (T5.2 – WP5).
- 01/04/2004–31/05/2004 **University of Ioannina, Michailidion Cardiology Center, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “K10/CARDITIS: Simulation-based Automated Diagnosis, Treatment and Prognosis of Cardiovascular Diseases.” Executed task: Development of patient-specific geometric model.
- 02/08/2004–30/10/2004 **University of Ioannina, Michailidion Cardiology Center, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “K5/ANGIOCARE.” Executed task: Product dissemination.
- 01/04/2004–31/12/2004 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “PYTHAGORAS – Strengthening Research Groups of the University of Ioannina, Subproject 21: Intelligent Systems for the Analysis of Cardiac Electrical Signals” (Code: 11703).  
  
Executed task: Processing of fetal electrocardiogram (ECG) – extraction from composite maternal ECG and development and evaluation of a rule-based system for the diagnosis of fetal cardiac condition.
- 01/02/2005–31/12/2005 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “PYTHAGORAS – Strengthening Research Groups of the University of Ioannina, Subproject 21: Intelligent Systems for the Analysis of Cardiac Electrical Signals” (Code: 11703).  
  
Executed task: Processing of fetal electrocardiogram (ECG) – extraction from composite maternal ECG and development and evaluation of a rule-based system for the diagnosis of fetal cardiac condition.
- 01/03/2005–30/06/2005 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “Study of the Role of Calcium Ion-Controlled Currents in the Generation of Normal and Pathological Action Potentials in Mammalian Myocardium” (Code: 11721).  
  
Executed task: Conversion of CELML code into CFORTRAN code.
- 01/01/2006–30/08/2006 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “PYTHAGORAS – Strengthening Research Groups of the University of Ioannina, Subproject 21: Intelligent Systems for the Analysis of Cardiac Electrical Signals” (Code: 11703).

Executed task: Processing of fetal electrocardiogram (ECG) – extraction from composite maternal ECG and development and evaluation of a rule-based system for the diagnosis of fetal cardiac condition.

- 29/03/2006–30/07/2006 **University of Ioannina, Michailidion Cardiology Center, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “K26/Study of the Association of Genetic Factors with Early Onset of Coronary Artery Disease and Major Acute Coronary Events.”  
Executed task: *System Development.*
- 01/09/2006–30/10/2006 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “A WEARABLE EMG AUGMENTATION SYSTEM FOR ROBUST BEHAVIOURAL UNDERSTANDING” (Code: 31577).  
Executed task: Biomedical Signal Processing – Applications in Feature Signal Classification and Clustering.
- 01/06/2007–31/12/2007 **University of Western Macedonia, Research Committee, Kozani (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “1005Γ: Technical Support Consultant for the Development of Metropolitan Networks” (Contract No. 100Γ/1372/4284).  
Executed task: Technical Work (External Collaborator): Monitoring and supervision, quality control of the implementation of the Metropolitan Optical Fiber Network of the Municipality of Ptolemaida.
- 01/06/2007–31/12/2007 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “Pre-hospital Emergency Medical and Nursing System for the Region of Epirus – Subproject 2: Design and Development of an Application for Ambulance Fleet Management and for the Transmission/Processing of Medical Data” (Code: 12109).  
Executed task: Development of the Ambulance Fleet Management Monitoring Application and System User Manual.
- 01/08/2008–30/09/2008 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “ICT Prediction of Cancer Recurrence” (Code: 80087).  
Executed task: Data and Image Analysis System – Current Situation Analysis and System Design.
- 01/07/2008–31/08/2008 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “PERFORM: A Complex, Multi-Parametric System for Continuous Evaluation and Monitoring of the Kinetic Condition of Patients Suffering from Neurodegenerative Diseases” (Code: 80039).  
Executed task: User Requirements and Analysis of Existing Technologies.
- 01/07/2008–15/11/2008 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Assignment for the implementation of a project under a research contract within the framework of “Routes for the Promotion, Exploitation, and Presentation of Roman and Early Christian Monuments in the Prefectures of Preveza and Thesprotia, and Greek Monuments in the Prefectures of Bari and Lecce” (Code: 80095).  
Executed task: Promotion and Dissemination of Historical Routes.

01/10/2008–21/12/2008

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “Design and development of computational models”, within the framework of the EU co-funded project “ARTreat: Multi-level Patient-Specific Artery and Atherogenesis Model for Outcome Prediction, Decision Support Treatment, and Virtual Hands-on Training” (Grant Agreement No. 224297).

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**POSTDOCTORAL RESEARCHER**

01/01/2009–31/12/2009

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “Design and development of computational models”, within the framework of the EU co-funded project “ARTreat: Multi-level Patient-Specific Artery and Atherogenesis Model for Outcome Prediction, Decision Support Treatment, and Virtual Hands-on Training” (Grant Agreement No. 224297).

01/03/2010–30/06/2010

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “Analysis and design of medical software”, within the framework of the EU co-funded project “ARTreat: Multi-level Patient-Specific Artery and Atherogenesis Model for Outcome Prediction, Decision Support Treatment, and Virtual Hands-on Training” (Grant Agreement No. 224297).

01/07/2010–31/12/2010

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “Analysis and design of medical software”, within the framework of the EU co-funded project “ARTreat: Multi-level Patient-Specific Artery and Atherogenesis Model for Outcome Prediction, Decision Support Treatment, and Virtual Hands-on Training” (Grant Agreement No. 224297).

01/01/2011–30/04/2011

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “Development of Decision Support Systems, Evaluation of the Blood Flow Modeling Subsystem”, within the framework of the EU co-funded project “ARTreat: Multi-level Patient-Specific Artery and Atherogenesis Model for Outcome Prediction, Decision Support Treatment, and Virtual Hands-on Training” (Grant Agreement No. 224297).

01/01/2011–30/04/2011

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “System Evaluation”, within the framework of the EU co-funded project “ARTreat: Multi-level Patient-Specific Artery and Atherogenesis Model for Outcome Prediction, Decision Support Treatment, and Virtual Hands-on Training” (Grant Agreement No. 224297).

01/11/2011–31/03/2012

**Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**

Project-based contract for the implementation of the task “Design and Development of a Decision Support System”, within the framework of the EU co-funded project “SensorART: A Remote Controlled Sensorized Artificial Heart Enabling Patient Empowerment and New Therapy Approaches” (Grant Agreement No. 248763).

- 01/03/2012–31/03/2012 **Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**  
Project-based contract for the implementation of the task “Design and Development of a Decision Support System”, within the framework of the EU co-funded project “SensorART: A Remote Controlled Sensorized Artificial Heart Enabling Patient Empowerment and New Therapy Approaches” (Grant Agreement No. 248763).
- 01/03/2012–31/03/2012 **Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**  
Project-based contract for the implementation of the task “Preparation of scientific paper(s)”, within the framework of the EU co-funded project “SensorART: A Remote Controlled Sensorized Artificial Heart Enabling Patient Empowerment and New Therapy Approaches” (Grant Agreement No. 248763).
- 01/04/2012–28/02/2013 **Foundation for Research and Technology – Hellas (FORTH), Institute of Biomedical Research (IBR), Ioannina (Greece)**  
Project-based contract for the implementation of the task “Design and Development of a Decision Support System”, within the framework of the EU co-funded project “SensorART: A Remote Controlled Sensorized Artificial Heart Enabling Patient Empowerment and New Therapy Approaches” (Grant Agreement No. 248763).
- 23/05/2012–30/04/2014 **University of Ioannina, Research Committee, Arta (Greece)**  
Project-based contract for the implementation of the project “Towards a Common Quality Control and Food Chain Traceability System for the Greek-Italian Primary Sector of Activity – AQROQUALITY” (Code: 18857), within the framework of the European Territorial Cooperation Programme Greece–Italy 2007–2013.  
  
Main tasks (WP4): 1) Development of a Database for the Electronic Cultivation File, 2) Development of a Special-Purpose Geographic Information System, 3) Population of databases, pilot application, and evaluation.
- 06/09/2013–28/02/2014 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Project-based contract for the implementation of the project “Innovative Decision Support System for Diagnosis and Treatment of IBD Patients, with Focus on the Population of Northwestern Greece” (Code: 81087), funded under NSRF 2007–2013.  
  
Executed task: Definition of User Requirements, Protocol Development, and System Design.
- 10/11/2013–31/10/2015 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Project-based contract for the implementation of the project “Innovative Decision Support System for Diagnosis and Treatment of IBD Patients, with Focus on the Population of Northwestern Greece” (Code: 81087), funded under NSRF 2007–2013.  
  
Executed task: Development of System Components.
- 01/06/2014–31/10/2015 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Project-based contract within the framework of NSRF 2007–2013: “Innovative Decision Support System for Diagnosis and Treatment of IBD Patients, with Focus on the Population of Northwestern Greece” (Code: 81087).  
  
Executed task: System Integration and Clinical Evaluation.
- 19/02/2015–30/10/2015 **University of Ioannina, Research Committee, Ioannina (Greece)**  
Project-based contract within the framework of “HERACLEITUS II: Central Actions for Doctoral



Research at the University of Ioannina (WP2)" (Code: 80647), NSRF 2007–2013.

Executed task: WP2.2.4: Development of Website (as part of the Work Package "Publicity Actions").

02/09/2015–31/10/2015

**University of Patras, Research Committee, Patras (Greece)**

Project-based contract within the framework of "Prototype Support System for Individuals with Autism (PSSA) based on an Intelligent Information System (IISS) [PAVEYS]" (Ref. D.746, MIS: 441235).

Executed task: WP1.4.4: Development of a national-scale pilot implementation plan & Pilot Application of IISS at national level; WP1.5: Quality Control and Evaluation of PSSA and IISS.

01/10/2020–31/03/2021

**Centre for Research and Technology Hellas (CERTH), Information Technologies Institute (ITI), Thessaloniki (Greece)**

Project-based contract within the framework of "INSPECT: Intelligent Hospital Beds for Patient Care" (MIS: T2EDK-03717, Operational Programme Competitiveness, Entrepreneurship and Innovation, NSRF 2014–2020 – Unified State Aid Action "Research – Create – Innovate").

Executed tasks: Participation in WP1 (T1.1, T1.2), WP2 (T2.1, T2.2).

Additional responsibility: Project Scientific Coordinator.

01/04/2021–30/06/2021

**Centre for Research and Technology Hellas (CERTH), Information Technologies Institute (ITI), Thessaloniki (Greece)**

Project-based contract within the framework of "INSPECT: Intelligent Hospital Beds for Patient Care" (MIS: T2EDK-03717, NSRF 2014–2020 – Unified State Aid Action "Research – Create – Innovate").

Executed tasks: Participation in WP3 (T3.1, T3.2).

Additional responsibility: Project Scientific Coordinator.

16/08/2021–31/09/2021

**Centre for Research and Technology Hellas (CERTH), Information Technologies Institute (ITI), Thessaloniki (Greece)**

Project-based contract within the framework of "INSPECT: Intelligent Hospital Beds for Patient Care" (MIS: T2EDK-03717, NSRF 2014–2020 – Unified State Aid Action "Research – Create – Innovate").

Executed tasks: Participation in WP3 (T3.1, T3.2), WP6 (T6.1).

Additional responsibility: Project Scientific Coordinator.

22/11/2021–21/12/2021

**Centre for Research and Technology Hellas (CERTH), Information Technologies Institute (ITI), Thessaloniki (Greece)**

Project-based contract within the framework of "DIA.022057-02-01-02: Intelli-WheelChair / 5069902" (Operational Programme Competitiveness, Entrepreneurship and Innovation, NSRF 2014–2020 – Unified State Aid Action "Research – Create – Innovate").

Executed tasks: Participation in WP1 (T1.2), WP4 (T4.2).

Additional responsibility: Project Scientific Coordinator.

11/11/2021–15/07/2023

**University of Western Macedonia, Research Committee, Kozani (Greece)**

Project-based contract within the framework of "INSPECT: Intelligent Hospital Beds for Patient Care" (MIS: T2EDK-03717, Operational Programme Competitiveness, Entrepreneurship and Innovation, NSRF 2014–2020 – Unified State Aid Action "Research – Create – Innovate").

Executed tasks: WP4: Support Platform, WP5: Subsystems Integration.

Additional responsibility: Project Scientific Coordinator.



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|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20/09/2023–16/12/2023 | <p><b>University of Ioannina, Research Committee, Ioannina (Greece)</b></p> <p>Project-based contract within the framework of “Deep-in-Biopsies: Intelligent Platform for Diagnosis/Staging of Biopsy Findings with Deep Learning” (Project Code: 61860, Operational Programme Competitiveness, Entrepreneurship and Innovation, NSRF 2014–2020 – Unified State Aid Action “Research – Create – Innovate”).</p> <p>Executed tasks: WP2: Platform Infrastructure Development – T2.1 Cloud Infrastructure Deployment, T2.2 Cloud Infrastructure Capabilities Report.</p> |
| 11/02/2024–31/05/2024 | <p><b>National Technical University of Athens (NTUA), ICCS – Institute of Communication and Computer Systems (Greece)</b></p> <p>Project-based contract (Senior Researcher) within the framework of “eBRT2030: European Bus Rapid Transit of 2030 – electrified, automated, connected” (Project Code: 63127300, Horizon Europe 2021–2027).</p> <p>Executed task: Participation in application and technical validation of developed technologies in the project pilots (WP5).</p>                                                                                      |
| 01/06/2024–31/12/2024 | <p><b>National Technical University of Athens (NTUA), ICCS – Institute of Communication and Computer Systems (Greece)</b></p> <p>Project-based contract (Senior Researcher) within the framework of “eBRT2030: European Bus Rapid Transit of 2030 – electrified, automated, connected” (Project Code: 63127300, Horizon Europe 2021–2027).</p> <p>Executed task: Participation in the integration of real-life EBRT demonstrations in the project cities (WP6).</p>                                                                                                    |
| 24/01/2025–Present    | <p><b>National Technical University of Athens (NTUA), ICCS – Institute of Communication and Computer Systems (Greece)</b></p> <p>Project-based contract (Senior Researcher) within the framework of “eBRT2030: European Bus Rapid Transit of 2030 – electrified, automated, connected” (Project Code: 63127300, Horizon Europe 2021–2027).</p> <p>Executed task: Participation in feasibility assessment for the deployment of BRT technologies in the project’s observer cities (WP8).</p>                                                                            |
| ----                  | <b>DIRECTOR, ADMINISTRATION DEPARTMENT</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 01/08/2016–17/01/2020 | <p><b>General Hospital “G. Hatzikosta”, Ioannina (Greece)</b></p> <p>Position: Manager</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| ----                  | <b>SPECIAL ADVISOR IN PUBLIC LEGAL ENTITY</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 03/06/2021–06/01/2024 | <p><b>Municipality of Ioannina, Ioannina (Greece)</b></p> <p>Special Advisor to the Mayor on issues of E-Government and Smart City applications.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |
| ----                  | <b>RESEARCH DISTINCTIONS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 27/04/2021            | <p><b>Patent (Greece)</b></p> <p>Title: “Micro-device (gadget) comprising a three-dimensional object made of PVC material with an internal magnet, metallic connector, and real key” (Registered under Utility Model Certificate No. 20003193).</p>                                                                                                                                                                                                                                                                                                                    |

## EDUCATION

|                       |                                                                                                                                                                                                                                                                                             |               |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| 01/10/1998–01/10/2002 | <b>Bachelor's Degree in Informatics – EQF Level 6</b><br>Aristotle University of Thessaloniki (AUTH), Thessaloniki (Greece)                                                                                                                                                                 | ΕΠΠ επίπεδο 6 |
| 20/09/2016–19/06/2018 | <b>Master's Degree (M.Sc.) in Health Services Management – EQF Level 7</b><br>University of Macedonia (UoM), Thessaloniki (Greece)<br><br>Master's Thesis: "Intelligent Analysis of Information Systems Data for Decision Support in Healthcare."                                           | ΕΠΠ επίπεδο 7 |
| 09/2015–29/09/2020    | <b>Master's Degree (M.Sc.) in Hardware and Software Technology: Design and Development of Pervasive Computing Systems – EQF Level 7</b><br>Hellenic Open University (HOU), Patras (Greece)<br><br>Master's Thesis: "Hospital Care Monitoring System Using Internet of Things Technologies." | ΕΠΠ επίπεδο 7 |
| 01/11/2002–01/11/2009 | <b>Doctorate (Ph.D.) in Informatics – EQF Level 8</b><br>University of Ioannina, Ioannina (Greece)<br><br>Doctoral Dissertation: "Analysis of Biological Tissues Using Biosignals: The Case of Fetal Electrocardiogram."                                                                    | ΕΠΠ επίπεδο 8 |

## 2004–Present Publications in international peer-reviewed journals with anonymous review process (Total: 30)

1. E.C. Karvounis, C. Papaloukas, K. Papanikolaou and D.I. Fotiadis. 'A wearable health monitoring system during pregnancy', Journal for the Quality of Life Research, vol. 2, No.1, pp. 139-144, 2004.
2. E.C. Karvounis, M.G. Tsiouras, D.I. Fotiadis, K.K. Naka. 'An Automated Methodology for Fetal Heart Rate Extraction from the Abdominal Electrocardiogram', IEEE Trans. on Information Technology in Biomedicine (T-ITB), vol. 11, pp. 628-38, 2007.
3. E.C. Karvounis, M.G. Tsiouras, D.I. Fotiadis. 'Detection of Fetal Heart Rate through 3D Phase Space Analysis from Multivariate Abdominal ECG recordings', IEEE Trans. on Biomedical Engineering (T-BME), vol. 56, pp. 1394-1406, 2009.
4. E.C. Karvounis, M.G. Tsiouras, C. Papaloukas, D.G. Tsalikakis, K.K. Naka, D.I. Fotiadis. 'A non-invasive methodology for fetus health monitoring during pregnancy', Methods of Information in Medicine, vol. 49(3), pp. 238-53, 2010.
5. P. Siogkas, A. Sakellarios, T.P. Exarchos, L. Athanasiou, E. Karvounis, K. Stefanou, E. Fotiou, D. I. Fotiadis, K.K. Naka, L.K. Michalis, N. Filipovic and O. Parodi. 'Multi-scale patient-specific artery and atherogenesis models', IEEE Trans. on Biomedical Engineering (T-BME) Letters - Special Issue: Multi-Scale Modeling and Analysis for Computational Biology and Medicine, IEEE Trans. on Biomedical Engineering (T-BME), vol. 58(12), pp.3464-8, 2011.
6. E.C. Karvounis, T.P. Exarchos, E. Fotiou, A.I. Sakellarios, D. Koutsouris and D.I. Fotiadis, 'ART-ML: A new markup language for modelling and representation of biological processes in cardiovascular diseases', Technology and Health Care, vol. 21, pp. 241–259, 2013.
7. Evaggelos C. Karvounis, Markos G. Tsiouras, Alexandros T. Tzallas, Nikolaos S. Katertsidis, Kostas Stefanou,, Yorgos Goletsis, Maria Frigerio, Alessandro Verde, Raffaele Caruso, Bart Meyns, John Terrovitis, Maria G. Trivella and Dimitrios I. Fotiadis, 'An intelligent decision support

system for the treatment of patients receiving ventricular assist device support', *Methods of Information in Medicine*, vol. 53 (Issue 2), pp. 121–136, 2014.

8. Alexandros T. Tzallas, Nikolaos S. Katertsidis, Evangelos C. Karvounis, Markos G. Tsipouras, George Rigas, Yorgos Goletsis, Krzysztof Zielinski, Libera Fresiello, Arianna DiMolfetta, Gianfranco Ferrari, Maria Giovanna Trivella and Dimitrios I. Fotiadis, 'Modeling and Simulation of Speed Selection on Left Ventricular Assist Devices', *Computers in Biology and Medicine*, vol. 51, pp. 128-139, 2014.
9. Tzallas AT, Tsipouras MG, Rigas G, Tsalikakis DG, Karvounis EC, Chondrogiorgi M, Psomadellis F, Cancela J, Pastorino M, Waldmeyer MTA, Konitsiotis S, Fotiadis DI., 'PERFORM: A System for Monitoring, Assessment and Management of Patients with Parkinson's Disease', *Sensors*, 14(11):21329-21357, 2014.
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