

PERSONAL INFORMATION

Evangelos D. Spyrou



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Sex Male | Date of birth 02/01/1979 | Nationality Greek

WORK EXPERIENCE

July 2018 – present

Research Associate

Hellenic Institute of Transport, Centre for Research and Technology Hellas www.certh.gr

- Vehicular Routing, Embedded Systems, European and National Projects Software Engineer

Business or sector Research Institute

February 2019 – June 2019
September 2019 – June 2020

Research Associate

School of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Greece, www.ee.auth.gr

- Vehicular Routing Hardware design and implementation, Routing algorithms

Business or sector University

June 2016 – January 2018

Developer

DRAXIS Environmental S.A , www.draxis.gr

- Wireless sensor networks, Machine learning, Software engineering

Business or sector Company

May 2015 – October 2015

Software Engineer

Institute of Applied Biosciences, Centre for Research and Technology Hellas, www.certh.gr

- Software engineering

Business or sector Research Institute

February 2012 – July 2012

Research Assistant

Imperial College London, www.doc.ic.ac.uk

- Wireless Sensor Networks

Business or sector University

October 2007 – September 2009

Teaching Assistant, EU projects contractor

Technological and Educational Institute of Epirus, currently department of the University of Ioannina

- Software Engineering, Advanced Internet Technologies and Computer Systems Security lecturer

[Business or sector](#) University

February 2007 – July 2007

Developer

Signaal Hellas S.A , <https://www.ssmart.gr/el/ssmart-signaal-hellas/>

- Defence Systems development

[Business or sector](#) Company

December 2002 – June 2003

Java Developer

Pegasus Interactive S.A

- Development of company internet service

[Business or sector](#) Company

December 2002 – June 2003

Lecturer

Private Institute Omiros, <https://www.omiros.gr/>

- Telecommunication and Networks, Visual Basic subjects

[Business or sector](#) Private Institute

EDUCATION AND TRAINING

January 2021 - present

Postdoctoral Researcher

Department of Informatics and Telecommunications, University of Ioannina

January 2015 – July 2019

PhD Electrical and Computer Engineering

School of Electrical and Computer Engineering, Aristotle University of Thessaloniki, Greece

- Game theory, wireless sensor networks, vehicular routing
- Thesis Title: **Link Quality Optimisation and Energy Efficiency in Wireless Sensor Networks using Game Theory**
- **Abstract:** Link Quality is a major in wireless communications. Strengthening the quality of service between links can ensure a stable and well-setup network. Transmission Power adjustment provides means to optimise network reliability in communication. The intuitive play would be to raise the transmission power, in order to produce a better Signal-to-Interference-and-Noise Ratio. However, this strategy introduces an extra overhead of interference, which results in increase of packet loss and collisions for the wireless medium. Furthermore, topology control is optimised with the adjustment of transmission power, since it is responsible for the node degree and the final neighbourhood establishment. Hence, it is intuitive that game-theoretic algorithms can be used to optimise link quality while keeping energy consumption through minimum transmission power to a low value. To this end, we formulate link quality optimisation problems as non-cooperative Potential Games. This class of games can be solved in a distributed fashion. We investigate power and topology control, as well as end-to-end throughput optimisation with convex and non-convex utilities and different properties in the strategy sets. Moreover, we investigate cooperative games in a combinatorial optimisation fashion, to form cooperative transmission policies.

September 2005 – September 2006

MSc Embedded Computer Systems Engineering (Distinction)

Northumbria University, UK

- Wireless Sensor Networks, embedded systems, formal methods
- Thesis Title: **Investigation of Energy- Efficient Routing Protocols for Wireless Sensor Devices Applied to Environmental Monitoring**
Abstract: The reduction of size and prices of hardware components that handle radio communication and computation resulted to the production of wireless sensor devices, also known as motes, in order to perform the demanding task of monitoring. Their applications include sensor acquisition from the environment, object tracking and health monitoring. Their primary features consist of the communication module, the computation and power components as well as the sensing hardware utility. A major ambassador of the wireless sensor devices is the MicaZ, manufactured by Crossbow. Its low-cost ATmega128L MCU in cooperation with the Chipcon CC2420 radio transceiver, provide a good solution for acquiring data from a sensorboard, such as the MTS300CA. This project consists of two parts. The first part of this project involves the development of drivers for the MTS300CA, a low-level application running in the MicaZ and finally, a GUI tool to enable sensor selection and data display. The second part investigates the major energy-efficient routing protocols for WSNs. This results to the implementation of a flooding and a negotiation-based protocol that will be simulated in order to clarify the most energy-efficient. The simulation will be performed in a RANDOM and UNIFORM topology by utilising the TOSSIM simulator. These topologies are generated by the LinkLayerModel tool, which provides topologies in respect to the gain between motes. TOSSIM does not support energy monitoring; thus a technique of calculating energy consumption by counting the number of messages exchanged in the network as a whole will be applied. The simulations shows that the flooding approach is the most efficient when the motes are deployed in a RANDOM topology.

September 1998 – June 2002

BSc Computing

Northumbria University, UK

- Real time systems, real time formal methods, programming, intranet development
- Dissertation Title: **Intranet Web Site for the Metropolitan University using Java**

PERSONAL SKILLS

Wireless Networks, Vehicular routing and fault detection, Wireless Sensor Networks, Cooperative and Non Cooperative Game Theory, Software Engineering

Mother tongue(s) Greek

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
1 st Certificate in English					

Communication skills

- Good transferability of knowledge due to lecturing experience
- Good communication with colleagues due to working in teams

Organisational / managerial skills

- Time management, motivating, team player, team leader
- Time Management acquired from PhD and industrial experience
- Motivating from PhD and working in teams
- Team Player due to participation in several projects
- Team Leader due to organising projects in the Technological Educational Institute of Epirus

Job-related skills

Organisational, Easy-going, easy to communicate with, open to suggestions and suggesting where applicable, relatively fast problem solving

Digital skills

SELF-ASSESSMENT

Information processing	Communication	Content creation	Safety	Problem solving
Proficient	Proficient	Proficient	Proficient	Proficient

Other skills ▪ Team Sports, Extreme Sports, Poetry, Writing

Driving licence Valid European Driver's License

ADDITIONAL INFORMATION

Honours and awards

- Aristotle University of Thessaloniki Scholarship 30/10/2018-3/12/2018
Subject: **DRIVE-IT with code 95714.**
- Erasmus Mundus Scholarship for Visit in AUTO-ID LAB, Keio University in Tokyo, JAPAN.
From 14/01/2018-2/7/2018.
Subject: Wireless communication in vehicular networks and Vehicle Fleets.
- WINSYS 2017 Best Student Paper Award: **Game-theoretic End-to-end Throughput Optimisation in Wireless Sensor Networks**
- SENSORNETS 2017 Best Student Paper Award: **Discrete Strategy Game-Theoretic Topology Control in Wireless Sensor Networks**

Publications:

https://www.researchgate.net/profile/Evangelos_Spyrou

Projects:

- DRIVE-IT with code 95714, national project – RESEARCH – CREATE- INNOVATE
- ΝΑΥΣ, INTERREG Greece – Cyprus 2014,2020, 5041723
- ΜΑΤΕΣ, 591889
- CARBODIN, Car Body Shells, Doors and Interiors, 881814
iPIM: Development of an Intelligent Onshore Pipeline Integrity Monitoring System, 673727.
- **ΚΡΗΠΙΣ ΙΙ ΟΔΥΣΣΕΑΣ**., 5002462
- **DIANA:** Detection and Integrated Assessment of Non-authorized water Abstractions using Earth Observation, 730109.
- **ΣΥΝΕΡΓΕΙΑ:** ΕΚΕΤΑ ΙΝΕΒ
- **SFINX,** INTERREG IIIC GREECE – ITALY (2000-2006)
- **INNOVA** INTERREG IIIC GREECE – ITALY (2000-2006)
- **ΜΕΤΑ-ΓΝΩΣΗ,** General Secretariat for Research and Technology.
- **WOMANWAY,** INTERREG III C GREECE – ITALY (2000-2006)