

ALEXANDRA BOUSIA

Curriculum Vitae

GENERAL INFORMATION

First Name: Alexandra

Last Name: Bousia

Professional status: Assistant Professor, Department of Business Administration, University of Thessaly

Work address: University of Thessaly – Gaiopolis, Larissa Ringroad, 41500, Larisa

Telephone: +302410684582

Email: albousia@uth.gr, albousia@gmail.com

Google Scholar Profile: <https://scholar.google.com/citations?user=feQanzoAAAAJ&hl=el>

EDUCATION AND TRAINING

- 09/2011-03/2016 **PhD in Green Wireless Networks**
Polytechnic University of Catalonia (UPC), Department of Signal Theory and Communications (TSC), Barcelona, Spain, (Final Grade: Excellent Cum Laude)
- Thesis Title: “Design of Energy Efficient Network Planning Schemes for LTE and LTE-Advanced Wireless Cellular Networks”, supervised by Professor Luis Alonso, and Senior Research Associate Christos Verikoukis
 - Special Doctoral Award
- 09/2008-12/2009 **M.A.Sc in Telecommunications, Signals and Networks**
University of Thessaly, Department of Computer and Communication Engineering, Volos, Greece (Final Grade: 8.88/10.0)
- Thesis Title: “Provision of High Quality of Service in Wireless Networks”, supervised by Professor Leandros Tassioulas, Professor Spiridon Lalis, and Professor Iordanis Koutsopoulos
 - Studying with an assistant teaching scholarship for the academic year, teaching the following courses
 - Linear algebra
 - Scientific calculation
 - Graduation rank: 4th
- 09/2008-11/2021 **Bachelor in Economics (Study was interrupted for 5 years, when the PhD was completed)**
University of Thessaly, Department of Economics, Volos, Greece (Final Grade: 7.77/10.0)
- 09/2003-11/2008 **5-year Diploma Degree (Bachelor, M.A.Sc) in Computer and Communication Engineering**
University of Thessaly, Department of Computer and Communication Engineering, Volos, Greece (Final Grade: 8.05/10.0)
- Thesis Title: “Distributed System for the Simulation of Multi-Domain/Multi-Physics Problems”, supervised by Professor Panagiota Tsompanopoulou, and Professor Emmanouil Vavalis
 - Graduation rank: 4th
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POST DOCTORAL RESEARCH

- 12/2019-12/2023 **POST-DOC RESEARCHER on the topic "Design and implementation of wireless networks and electricity networks using Artificial Intelligence"**, supervised by Professor Aspasia Daskalopulu, Department of Electrical and Computer Engineering, University of Thessaly, Volos, Greece
- 05/2018-05/2019 **POST-DOC RESEARCHER in the Programs entitled: "LIFE14 ENV/GR/00611, Life Green YourMove: Development and promotion of a co-modal journey planning platform to minimize GHG emission in Europe" and "LIFE17 ENV/ GR/000215: Life Green YourRoute:**

06/2016-08/2017 **A European innovative logistic platform for last mile delivery of goods in urban environment",** supervised by Professor Georgios Sacharidis, Department of Mechanical Engineering, University of Thessaly, Volos, Greece.

POST-DOC RESEARCHER in the Program entitled: "IKY EXCELLENCE SCHOLARSHIPS FOR POSTGRADUATE STUDIES IN GREECE - SIEMENS PROGRAM", in the context of the compromise agreement between the Hellenic Republic and Siemens, regarding the granting of scholarships by the IKY to carry out postdoctoral research in Greece, academic year start: 2016-2017, on the topic "Design and implementation of protocols for energy and cost optimization in wireless networks", supervised by professor Antonios Argyriou, Department of Electrical and Computer Engineering, University of Thessaly, Volos, Greece.

WORK EXPERIENCE

02/2023-01/2024 **ADMINISTRATIVE OFFICER**
Public Employment Service, KPA2 Almyrou, Greece

04/2011-02/2016 **MARIE CURIE RESEARCHER**
Polytechnic University of Catalonia (UPC), Department of Signal Theory and Communications (TSC), Barcelona, Spain

- Project: An early stage training network in enabling technologies for green radio (GREENET), Supervisor: Luis Gonzaga Alonso Zarate
- Research and proposal of energy-efficient and cost-effective algorithms and protocols for fourth generation (4G) wireless mobile networks

Work on resource allocation, techno-economics, "green" wireless networks and optimized network design

10/2013-01/2014 **EMPLOYEE/RESEARCHER**
Innoroute GmbH, Munich, Germany

- Working in a research team on the improvement of OpenMAC platform for testing and proposing MAC functionalities
- Secondement for the Project: An early stage training network in enabling technologies for green radio (GREENET)

07/2006-09/2006 **INTERSHIP**
Research & Development Department at Vodafon-Panafon S.A., Athens, Greece

- Analysis of Mobile Terminal Positioning Accuracy with Received Signal Strength Based Techniques

ACADEMIC TEACHING

03/2024 - Present **ASSISTANT PROFESSOR**
University of Thessaly, Department of Business Administration, Larisa, Greece
Courses:

- E-Business: Spring 2024
- Enterprise Resource Planning Systems: Spring 2024

2020 -2023 **ACADEMIC PARTNER AND LECTURER**
University of Thessaly, Department of Computer Science and Telecommunications, Lamia, Greece
Courses:

- Internet of Things: Spring 2020, Spring 2021, Spring 2022
- Information Retrieval Systems: Spring 2020, Spring 2021, Spring 2022
- Software Technologies: Fall 2020
- Bioinformatics: Fall 2022

2017-2020 **ADJUNCT PROFESSOR**
University of Thessaly, Department of Electrical and Computer Engineering, Volos, Greece

	Course:
	– System Modeling and Performance: Spring 2017, Spring 2018, Spring 2019
2020-2022	ACADEMIC SCHOLARSHIP INSTRUCTOR University of Thessaly, Department of Electrical and Computer Engineering, Volos, Greece Course:
	– System Modeling and Performance: Spring 2020, Spring 2021, Spring 2022
	University of Thessaly, Department of Energy Systems, Larisa, Greece
	– Artificial Intelligence in Power Systems: Spring 2022
2016-2024	M.A.Sc STUDIES INSTRUCTOR University of Thessaly, Department of Electrical and Computer Engineering, Volos, Greece Courses:
	– Computer Graphics: Fall 2016, Fall 2017
	– Security and Cryptography: Spring 2017, Spring 2018, Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023
	– Artificial Intelligence in Power Systems: Fall 2019, Fall 2020, Fall 2021, Fall 2022, Fall 2023
	– Design and Implementation of Power Systems: Fall 2022
	– Liberalization of Electricity Market: Spring 2022, Spring 2023
2010-2011	ADJOINT ASSISTANT PROFESSOR Technological Educational Institute of Thessaly, Larisa, Greece Course:
	– Algorithms: Fall 2010
2006-2011	TEACHING INSTRUCTOR Private School Courses:
	– Parallel Computing: Fall & Spring 2006-2011
	– Linear Algebra: Fall & Spring 2006-2011
	– Circuit Analysis: Fall & Spring 2006-2011
	– Compilers: Fall & Spring 2006-2011
	– Programming Languages (C/C++, Java, MATLAB, Assembly): Fall & Spring 2006-2011
	– Networks: Fall & Spring 2006-2011
2009-2010	TEACHING PROFESSOR 2nd Institute of Vocational Training, Volos, Greece Courses:
	– Introduction to Local Networks: Fall 2009
	– Advanced Topics of Networks: Spring 2010
	– Computer Usage: Spring 2010
2006-2009	TEACHING AND LABORATORY ASSISTANT University of Thessaly, Department of Electrical and Computer Engineering, Volos, Greece Courses:
	– Scientific Computing & Matlab: Spring 2006, 2007, 2008, 2009
	– Linear Algebra: Fall 2006, 2007, 2008, 2009
	– Circuit Analysis: Fall 2006, 2007, 2008, 2009

FELLOWSHIPS AND AWARDS

2016-2017	Scholarship for post-doc research, State Scholarships Foundation (IKY)
2016	EuCNC/EURACON Student Best Paper Award in European Conference on Networks and Communications (EuCNC)
2014	Best Paper Award in IEEE Global Communications Conference (GLOBECOM)
2011-2014	Scholarship for PhD dissertation, Achilopoulos General Hospital of Volos

2010	Full Grant to attend the seminar “Network and Information Security”, powered by Onassis Public Benefit Foundation and FORTH
2008-2009	Scholarship for M.A.Sc studies, Department of Computer and Communication Engineering, University of Thessaly
2008	Full Grant to attend the seminar “Embedded networked systems: theory and applications”, powered by Onassis Public Benefit Foundation and FORTH
2006-2007	Scholarship for undergraduate studies, Institution of Deligiorgis – General Grade: 1 st

SCIENTIFIC COMMUNITY ACTIVITIES

INTERNATIONAL CONFERENCES – ORGANIZATION AND COORDINATION

2012	Web Chair: IEEE International Workshop on Computers-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), Barcelona, Spain
2012	Local Arrangement Chair: IEEE International Workshop on Computers-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), Barcelona, Spain

SCIENTIFIC MEETINGS – ORGANIZATION AND COORDINATION

2014	Organization of the 7 th seminar of GREENET project/ Barcelona, Spain
2014	Organization of the 9 th plenary meeting of GREENET project/ Barcelona, Spain
2014	Organization of the 8 th plenary meeting of GREENET project/ Munich, Germany
2014	Organization of the 6 th seminar of GREENET project/ Munich, Germany
2012	Organization of the 3 rd seminar of GREENET project/ Barcelona, Spain
2012	Organization of the 1 st industrial dissemination day of GREENET project/ Barcelona, Spain
2011	Organization of the 1 st seminar of GREENET project/ Barcelona, Spain
2011	Organization of the 1 st plenary meeting of GREENET project/ Barcelona, Spain

TECHNICAL PROGRAM COMMITTEE MEMBER

International Conference on Power, Energy engineering and Management (PEEM 2015)
 International Conference on Social Science (ICSS 2016)
 IEEE International Communications Conference (ICC 2016)
 International Conference on Green Materials and Environmental Engineering (GMEE 2015)
 IEEE International Communications Conference (ICC 2017)
 International Conference on Environmental Research and Public Health (ICERP 2016)
 International Conference on Mechanism, Electronics, Automation (MEA 2016)
 International Conference on Electronic and Information Technology (ICEIT 2016)
 International Conference on Computer Science and Communication Technology (CSCT 2016)
 International Workshop on Wireless Communication and Network (IWWCN 2016)
 IEEE Global Communications Conference (GLOBECOM 2017)

REVIEWER IN INTERNATIONAL CONFERENCES AND INTERNATIONAL JOURNALS

IEEE International Conference on Communications (ICC), IEEE Vehicular technology Conference (VTC), IEEE Global Communications Conference (GLOBECOM), IEEE International Workshop on Computers-Aided Modeling Analysis and Design of Communication Links and Networks (CAMAD), IEEE Consumer Communications & Networking Conference (CCNC), Baltic Congress on Future Internet Communications (BCFIC), International Conference on Computer, Information and Telecommunication Systems (CITS), International Conference on Computer and Information Technology (ICCIT), International Conference on Telecommunications (ICT), EAI International Conference on Mobile Networks and Management (MONAMI), IEEE International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC), IEEE Wireless Communications and Networking Conference (WCNC)

IEEE Journal on Selected Areas in Communications (JSAC), Telecommunication Systems Journal, IEEE Transactions on Wireless Communications (TWC), IEEE Transactions on Cognitive Communications and Networking (TCCN), IEEE Transactions on Communications (TCOM), Recent Patents on Computer Science Journal, IEEE Transactions on Vehicular Technology, (TVT) EURASIP Journal on Wireless Communications and Networking, Journal of Communications and Networks, Journal of Supercomputing

INVITED TALKS

2012 Implementation of reliable MAC solutions for energy efficient cooperative networks, Industrial dissemination day, Barcelona, Spain

MEMBERSHIP OF SCIENTIFIC SOCIETIES

IEEE Member

TECHNICAL SKILLS

Programming: C, C++, Java, Assembly MIPS, Prolog, Lisp, Clips, Ruby, Visual Basic
Operating Systems: Windows, Linux
Networks: TCP/IP Network Programming, NS-3
Web Services: HTML, CSS
Technical Computing Languages: Matlab, Mathematica, R
Hardware: VHDL, VLSI, Spice, Flex, Bison, Verilog
Database: mySQL, PL/SQL (ORACLE)

LANGUAGES

Greek: Mother tongue
English: Proficient user (C2)
French: Proficient user (C1)
Spanish: Independent user (B2)

PROJECTS

GREENET (PITN-GA-2010-264759)
CO2GREEN (TEC2010-20823)
GEOCOM (TEC2011-27723-CO2-01)
GREEN-T (TSI-020400-2011-16-CP8-006)
AGAUR (2014-SGR-1551)
CellFive (TEC2014-60130-P)
5GWireless (641985)
GreenYourRoute (LIFE17 ENV/GR/000215)
GreenYourMove (LIFE14 ENV/GR/000611)

SEMINARS

2015 Smart Energy Workshop, hosted by the Institute for Research and Technology Thessaly (IRETETH) of the Center for Research and Technology-Hellas (CERTH), (Volos, Greece)
2014 Seminar on project management and European Commission funding mechanisms, proposal writing and project execution skills, hosted by CTTC (Barcelona, Spain)
2014 Seminar on market exploitation of scientific research results and business planning and stochastic models for networks and wireless communications, hosted by InnoRoute GmbH (Munich, Germany)
2013 Seminar on real life experimental tools of wireless protocols, network virtualization for LTE-A networks, energy-aware wireless networking through self-adaptation and virtualization as a tool for energy efficiency, hosted by Supelec (Paris, France)

2012	Seminar on Stochastic models, Complex evolving networks and Malware propagation, hosted by Demokritos (Athens, Greece)
2012	Seminar on Cross-Layer Architectures, Stochastic Geometry and simulations environments, hosted by CTTC (Barcelona, Spain) and UPC (Barcelona, Spain)
2012	Seminar on Cognitive Radio Networks, Cooperative Communications and MIMO Systems, hosted by University of Edinburgh (Edinburgh, Scotland)
2011	Seminar on writing scientific papers, understanding patents and on presentation skills, hosted by CTTC (Barcelona, Spain)
2010	"Network and Information Security", powered by Onassis Public Benefit Foundation and FORTH
2008	"Embedded networked systems: theory and applications", powered by Onassis Public Benefit Foundation and FORTH

PUBLICATIONS

INTERNATIONAL CONFERENCES

- [C1] **Alexandra Bousia**, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Green Distance-Aware Base Station Sleeping Algorithm in LTE-Advanced", in Proceedings of IEEE International Communications Conference (ICC), Ottawa, Canada, June 2012
- [C2] **Alexandra Bousia**, Elli Kartsakli, Luis Alonso, and Christos Verikoukis, "Energy Efficient Base Station Maximization Switch Off Scheme for LTE-Advanced", in Proceedings of IEEE International Workshop on Computer-Aided Modelling Analysis and Design of Communication Links and Networks (CAMAD), Barcelona, Spain, September 2012
- [C3] **Alexandra Bousia**, Elli Kartsakli, Luis Alonso, and Christos Verikoukis, "Dynamic Energy Efficient Distance-Aware Base Station Switch On/Off Scheme for LTE-Advanced", in Proceedings of IEEE Global Communications Conference (GLOBECOM), Anaheim, California, USA, December 2012
- [C4] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Game Theoretic Approach for Switching Off Base Stations in Multi-Operator Environments", in Proceeding of IEEE International Communications Conference (ICC), Budapest, Hungary, June 2013
- [C5] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Sharing the Small Cells for Energy Efficient Networking: How much does it cost?", in Proceeding of IEEE Global Communications Conference (GLOBECOM), Austin, Texas, USA, December 2014, **Best Paper Award**
- [C6] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Auction-based Offloading for Base Station Switching Off in Heterogeneous Networks", in Proceeding of European Conference on Networks and Communications (EuCNC), Athens, Greece, June 2016, **EuCNC/EURACON Student Best Paper Award**
- [C7] **Alexandra Bousia**, Aspasia Daskalopulu, "Double Auction Offloading: Challenges and Opportunities for Energy Efficient Telecommunication Networks", in Proceedings of 25th Pan-Hellenic Conference on Informatics (PCI 2021), November 26–28, 2021, Volos, Greece.

JOURNALS

- [J1] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Game Theoretic Infrastructure Sharing in Multi-Operator Cellular Networks", in IEEE Transactions on Vehicular Technology, vol. 65, no. 5, pp. 3326-3341, May 2016
- [J2] Angelos Antonopoulos, Elli Kartsakli, **Alexandra Bousia**, Luis Alonso, and Christos Verikoukis, "Energy-efficient Infrastructure Sharing in Multi-Operator Mobile Networks", in IEEE Communications Magazine, Green Communications and Computing Network Series, vol. 53, no. 5, pp. 242-249, May 2015

[J3] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Multiobjective Auction-based Switching Off Scheme in Heterogeneous Networks: To Bid or Not To Bid?", in IEEE Transactions on Vehicular Technology, vol. 65, no. 11, pp. 9168-9180, November 2016

[J4] **Alexandra Bousia**, Aspasia Daskalopulu, Elpiniki I. Papageorgiou, "Double Auction Offloading for Energy and Cost Efficient Wireless Networks", in Mathematics, Engineering Mathematics, Special Issue: Mathematical Programming Methods in Energy Optimization, November 2022

[J5] **Alexandra Bousia**, Aspasia Daskalopulu, Elpiniki I. Papageorgiou, "An Auction Pricing Model for Energy Trading in Electric Vehicle Networks", in Electronics, Special Issue Wireless Sensor Networks Applications for Smart Cities, July 2023

BOOKS & BOOK CHAPTERS

[BC1] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Energy Efficient Schemes for Base Station Management in 4G Broadband Systems", chapter in "Broadband Wireless Access Networks for 4G: Theory, Application and Experimentation", IGI Global publication, 2013, pp. 101-121, Chapter 6, ISBN13: 9781466648883; ISBN13: 9781466648890

[BC2] **Alexandra Bousia**, Elli Kartsakli, Angelos Antonopoulos, Luis Alonso, and Christos Verikoukis, "Game Theoretic Infrastructure Sharing in Wireless Cellular Networks", chapter in "Game Theory Framework Applied to Wireless Communication Networks", IGI Global publication, 2015, pp. 368-398, Chapter 14, ISBN15: 1466686421, DOI: 10.4018/978-1-4666-8642-7

[BC3] **Alexandra Bousia**, "Energy Efficient Resource Allocation Scheme via Auction-based Offloading in Next-Generation Heterogeneous Networks", chapter in "Resource Allocation in Next-Generation Broadband Wireless Access Networks", ACCEPTED FOR PUBLICATION

[B1] **Alexandra Bousia**, "Energy Efficient Network Planning Scheme for LTE and LTE-Advanced", Scholars' Press, 2016, pp. 1-204, Project-ID: 5943, ISBN: 978-3-659-84123-1