

CURRICULUM VITAE

Dr. Fotis Foukalas
University of Thessaly
Informatics and Telecommunications
Lamia, Greece

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Personal Information

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Education

Ph.D., Informatics and Telecommunications, July 2011, National Kapodistrian University of Athens, Athens, Greece.
M.Sc., Technology Systems, June 2004, National Technical University of Athens, Athens, Greece
Diploma (BSc/MSc) in Electrical and Computer Engineering, October 2001, Aristotle University of Thessaloniki, Thessaloniki, Greece.

Positions

Assistant Professor (Oct.2021-present): Dept. Informatics and Telecommunications, University of Thessaly, Lamia, Greece

Senior Research Fellow (Oct.2019-Oct-2021): High Dimensional Brain Modeling, Faculty of Brain Science, University College London, United Kingdom.

Senior Researcher (Dec.2016-Sep.2019): IoT Research Center, Denmark Technical University, Copenhagen, Denmark.

Senior Researcher (Nov.2015-Nov.2016): Industrial Systems Institute, Athena Research and Innovation Center, Athens, Greece.

Research Fellow (Nov.2013-Nov.2016): Electrical Engineering, College of Engineering, Qatar University, Doha, Qatar.

Researcher (Sep.2011-Oct.2013): Industrial Systems Institute, Athena Research and Innovation Center, Athens, Greece.

Postdoc researcher (Nov.2011-Oct.2013): Electrical Engineering, College of Engineering, Qatar University, Doha, Qatar.

Researcher (Sep.2008-Aug.2011): Center of Technology and Research Thessaly, Volos, Greece.

Research Assistant (May.2003-Aug.2007): Dept. of Informatics and Telecommunications, National and Kapodistrian University of Athens.

Research Assistant (Oct.2001-Apr.2003): School of Electrical and Computer Engineering, National Technical University of Athens.

Visiting Positions

Visiting Researcher (Jun.-Aug.2015): Electrical Engineering, College of Engineering, Worcester Polytechnic Institute, Boston, USA.

Visiting Researcher (Jun.-Aug.2012): Electrical Engineering, College of Engineering, Princeton University, New Jersey, USA.

Industrial consulting

Cognitive Innovations (Jul.2018-Jun.2019), Resource management in Cognitive 5G Networks, Athens, Greece.

Cognitive Innovations (Sep.2016-Jun.2017), Cognitive IoT platform, commercial application for Industrial applications, Athens, Greece.

Consultant (Sep.2007-Aug.2009), Hellenic Organization of Telecommunications (OTE SA), High Speed Metropolitan Networks Installation and Configuration in Thessaly Region.

Consultant (Oct.2007-Jan.2008), CyberStream Ltd., Wireless Communications Infrastructure Deployment for the city of Larissa.

Current Research Projects

1. (Jun.21-today): (PI¹) Intelligent Automotive Network Applications, 5G innovations for verticals with third party services, ICT-41-2020, H2020 call.

Completed Research Projects

1. PRIMA (Sep.2020-Feb.2021) PRIVacy preserving IoT data analysis using federated MACHine learning protocol, Next Generation Internet, 3rd Open Call, Cogninn.
2. Autonomous Big Data Medical Platform, UCL Brain Sciences, Jun-Oct. 2020.
3. Edge AI for IoT Networks, Cogninn, Jan-May 2019.
4. Network Slicing for massive NB-IoT applications, DTU Compute, Jun-Sep 2019.
5. Dependable Wireless Industrial IoT networks, DTU Compute, Jan-May 2019.
6. FLAME (May - Dec.2019): Mobile DASH services using NVF in small cell networks, FLAME OC, H2020.

¹Principal Investigator.

7. CoPro5G (Feb.2019-Mar.2019): Cooperative Proactive resource management for 5G in the unlicensed spectrum, Fed4Fire+ OC, H2020.
8. SafeCop (Dec.2016-Present): Safe Cooperating Cyber-Physical Systems using Wireless Communications, ECSEL JU, H2020.
9. WishFul Open Call 2 (Jul.2017-Dec.2017): Cognitive Carrier Selection for WiFi and LTE Coexistence: A GNU Radio Implementation, EU ICT H2020.
10. Cogni-things (Jun.2016-Dec.2016): Cognitive Internet of Things Platform for Fog Computing Industrial Applications, Cognitive Innovations PC, 2017.
11. p-SparC (Nov.2013-Nov.2016): a Framework for Pervasive-Spectrum Aggregation Radio with Cognition, National Priorities Research Program (NPRP), Qatar National Research Fund (QNRF), 2013.
12. SOLDER (Nov.2013-Nov.2016): Spectrum Overlay through Aggregation of Heterogeneous Dispersed Bands, EU FP7 ICT, no. 619687, 2013.
13. (Nov.2011-Oct.2012) "Cognitive Communication Channels: Detection, Medium Access, Cooperation and Secrecy", National Priorities Research Program (NPRP), Qatar National Research Fund (QNRF), 2011.
14. (Nov.2012-Oct.2013) "Efficient Control of Stochastic Cognitive Radio Networks", National Priorities Research Program (NPRP), Qatar National Research Fund (QNRF), 2012.
15. (Oct.2005-Oct.2007) SCIER (Sensor and Computing Infrastructure for Environmental Risks) IST-2005-2.5.12.
16. (Oct.2003-Sep.2005) E2R (End-to-End Reconfigurability) Integrated Project IST-2003-507995.

17. (Apr.2003-Oct.2003) POLOS (Integrated Platform for Location-based Services) IST-2001-35283.
18. (Nov.2002-Sep.2003) ANWIRE (Academic Network for Wireless Internet Research in Europe) IST-2002-38835.
19. (Oct.2001-Aug.2002) WINMAN (WDM and IP Network MANagement) IST-1999-13305.
20. (Sep.2002-Mar.2003) TEMPO (Technologies and Applications in Multiprotocol Networks) (1182/2002).

Teaching Experience

Network slicing for Narrow Band IoT, Spring 2019, M.Sc., DTU Fotonik, Technical University of Denmark.

Wireless Networks Security, Spring 2019, M.Sc., DTU Compute, Technical University of Denmark.

Sensor Networks: embedded protocols, Fall.2018, M.Sc., DTU Compute, Technical University of Denmark.

Wireless Mobile Communications: Advanced Topics, Spring 2014-Spring 2015, B.Sc. Electrical Engineering, Qatar University

Wireless Sensor Networks: architecture and protocols, Spring 2013-Spring 2016, M.Sc., Dept. of Electrical and Computer Engineering, University of Thessaly.

Broadband networks, 2008-2010, Dept. Computer Engineering, University of Thessaly.

Mobile Communications, 2008-2010, Dept. Computer Engineering, University of Thessaly.

Student Advising

Chrish Fulon, Postdoc (UCL), Neural Signal and Information Processing, Jan-Jun. 2020

Athanasios Tziouvaras, (UTH), Near data processing and edge AI for IoT systems, Jan-Jun, 2020

Dimitris Revithis and Maja Lund, M.Sc. (DTU) Jun. 2017, Distributed Control for Cooperative Mobile Robots. Member of Supervising Team, Dept. of Computer Science, Denmark Technical University, 2017.

Nestor Bonjorn Lopez and Ferran Canellas Cruz, M.Sc. (DTU) Jul. 2017, Decentralized Sidelink D2D 5G Vehicular Communications. Member of Supervising Team, Dept. of Computer Science, Denmark Technical University, 2017.

Ana Lasheras Mas, B.Sc. (DTU) Jan. 2017, Communications Protocol for Cooperative Mobile Robots. Member of Supervising Team, Dept. of Computer Science, Denmark Technical University, 2017.

Anastastios Koutlis, M.Sc. (UTH) Aug. 2015, Inference and Control for the Smart Grid Using Wireless Sensor Networks. Member of Supervising Team, Dept. of Electrical and Computer Engineering, University of Thessaly, 2015.

Apostolis Xenakis, Ph.D. (UTH) Aug. 2014, Cross-layer Energy Efficient Topology Control in Wireless Sensor Networks. Member of Supervising Team, Dept. of Electrical and Computer Engineering, University of Thessaly, 2014.

Research Assistants' Supervising

Thanasis Tziouvaraa (Jan.19-Jun.2019), "Neural Networks enabled Computing Architectures", Supervisor, Dept. of Electrical and Computer Engineering, University of Thessaly.

Apostolis Galanopoulos, (Dec.2014-Oct.2016), "Unlicensed Spectrum Aggregation in LTE-A System: Analysis and Simulations". Supervisor, Dept. of Electrical and Computer Engineering, University of Thessaly.

Christos Tsinos, (Dec.2014-Dec.2015), Industrial Systems Institute, Athena Research and Innovation Center, "Statistical Signal Processing Algorithms for Cognitive Carrier Aggregation Systems".

Stelios Stefanatos, (Oct.2015-present), Industrial Systems Institute, Athena Research and Innovation Center, "Filter-bank based transceiver and resource allocation in Inter-band Carrier Aggregation".

Reza Sakheri, (Sep.2015-Mar.2016), "Multi-user Heterogeneous Networks Performance Analysis over Fading Channels". Supervisor, Dept. of Electrical Engineering, Qatar University

May Moussa, (Sep.2013-Mar.2014), "Interference Cancellation through In-

terference Alignment for Cognitive Cellular Networks”. Supervisor, Dept. of Electrical Engineering, Qatar University

Invited Talks

1. University of Bristol (Jul.2019): Embedding AI for Digital Networking Infrastructures, Bristol, United Kingdom.
2. KTH Royal Institute of Technology (Mar.2019): Collaborative Industrial Robotics through IoT Communications, Stockholm, Sweden.
3. Telecom SudParis (Apr.2018): Signal Processing for IoT Applications, Paris, France.
4. Heriot watt university (Jan.2017): Cooperative Communications for D2D Devices, Edinburgh, United Kingdom.
5. cole polytechnique fdrale de Lausanne (June 2012): To Relay or Not to Realy in Cognitive Radio Sensor Networks, Lausanne, Switzerland.

Technical Skills

Matlab, Mathematica, C/C++, embedded and network Programming, Python.

Professional Societies and Service

Memberships: IEEE Member (since 2012), IEEE Senior Member (applied 2019), Member of Technical Chamber of Greece.

Technical Program Committee Member:

- TPC Member, Globecom 2021 CRAEN (Cognitive Radio and AI-Enabled Networks Symposium).

- TPC Member, CyberC 2020: International Conference on Cyber-enabled distributed computing and knowledge discovery.
- TPC Member, IEEE ICC'21 - IoTSN Symposium (2021 IEEE International Conference on Communications (ICC): IoT and Sensor Networks Symposium).
- Special Session, IEEE ETS 2019, Baden Baden, Germany, May 2019.
- 26th International Conference on Telecommunications, Apr. 2019.
- IEEE Conference on Standards for Communications & Networking, Helsinki, Finland, Sep. 2017.
- Invited Speaker, Dynamic Spectrum Management: A Building block in 5G Networks, EuCNC 2016, Athens, Greece.
- Session Chair, Heterogeneous Networks, IEEE WCNC 2013, Shanghai, China.
- Session Chair, Dynamic Spectrum Access, IEEE CROWNCOM 2013, Washington, USA.
- Session Chair, Signal Processing and Communications, IEEE GCC 2013, Doha, Qatar.
- IEEE Symposium on Computers and Communications (*ISCC11*), Corfu, Greece, 2011.
- COST Terra on Cognitive Radio Networks 4th Meeting, Brussels, November, 2011.
- Wireless World Research Forum, 11th Meeting, Oslo, Norway, 2004.

Editorial Board:

- Topic Editor: WSN and IoT, MDPI Sensors Journal: <https://www.mdpi.com/journal/sensors>

Reviewer Service:

- IEEE, Transactions on Wireless Communications.
- IEEE, Transactions on Cognitive Communications and Networking.

- IEEE, Transactions on Communications.
- IEEE, Transactions on Vehicular Technology.
- IEEE/ACM, Transactions on Networking.
- Elsevier, Computers and Electrical Engineering.
- MDPI, Sensors.

IEEE Style Biographical Sketch

Fotis Foukalas (M'12,SM'20) received his 5 years Diploma (M.Eng.) in Electrical and Computer Engineering from the Aristotelian University of Thessaloniki, Greece in 2001. He also received his M.Sc. in Information and Communications Technologies from the National Technical University of Athens in 2004. He received his Ph.D. in Informatics and Telecommunications from the National and Kapodistrian University of Athens (University of Athens) in 2011. His research interests are in the area of wireless mobile networks, internet of things and cyber physical systems. He was a research scientist at Athena Research and Innovation Center since Sep. 2011, where was research group head since Sep. 2016. He was also research fellow in communications and networking with the department of Electrical Engineering at Qatar University from Nov. 2011 to Nov. 2016. He has participated in numerous European and International research programs. He has published more than 30 journals and 40 conferences so far, having also published 5 book chapters. He has also five years teaching experience on the topics of communications and networking. He was the coordinator of the SOLDER FP7 ICT project on Future Networks and co-principal investigator of the p-Sparc NPRP QNRF project from Nov. 2013 to Nov.2016. He was senior researcher at IoT Research Center at Technical University of Denmark collaborating with DTU Compute since Dec.2017 to Sep.2019 in the area of IoT network. He was also with the high dimensional machine learning research group at University College London since Oct.2019 to Aug.2021. He is now an assistant professor at the department of informatics and telecommunications of University of Thessaly.