Dr. Marios Raspopoulos

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Date of Birth: 10th July 1978

EMPLOYMENT

Sept. 2021-Now — **Associate Professor**, UCLan Cyprus, School of Sciences
- Deputy Head of School
- Programme Coordinator of BEng (Hons) Computer Engineering
- Chair of the Research Committee

April 2023-Now — **Research and Innovation Scientist, INSPIRE Research Centre**
- Coordination and participation in cutting-edge ICT R&D projects

Sept. 2015-August 2021 — **Assistant Professor**, UCLan Cyprus, School of Sciences
- Programme Coordinator of BEng (Hons) Electrical and Electronic Engineering
- Chair of the Innovation & Enterprise Committee

June 2007-August 2015 — **Chief Technical Officer (CTO)**, Sigint Solutions Ltd.
- Head of Research, Innovation and Development Activities
  - Coordination and participation in cutting-edge ICT R&D projects receiving 2.3 million euros in funding for the period 2006-2014.
- Head of Technical, Consulting and Education Activities
- Establishment, Coordination and Quality Management of an ISO 17025 Electromagnetic Radiation Measurement Laboratory.
- Coordination of Software Development and ICT Platform Development Project

Jan. 2013- Jan 2018 — **Adjunct Lecturer**, Open University of Cyprus.
Coordination, creation of Course material and Teaching of Telecommunications and Networking Courses.

Sept. 2004-Aug. 2007 — **Research Assistant/Associate**, Centre for Communications Systems Research, University of Surrey, UK.
- Participation in Research and Development Projects
- Teaching Assistant

EDUCATION

Sept. 2004 - Mar. 2008 — **Ph.D.** *Telecommunication Engineering*. University of Surrey, UK
- ***Ph.D. Thesis***: "Radio Propagation in Frequency Selective Buildings".
- ***Supervised by***: Dr. Stavros Stavrou, Prof. Barry Evans.
- ***Honours Awarded***: University Research Scholarship (URS)

Sept. 2003-Sept. 2004 — **M.Sc.** *Communications Networks and Software*, University of Surrey, UK
- ***Grade***: 84% (Distinction)
- ***M.Sc Thesis***: "Deterministic modelling in an indoor wireless environment and the effect of Frequency Selective Surfaces".
- ***Honours Awarded***: MSc Advisory Board Prize, Cable and Wireless Prize

Sept. 2001- June. 2003 **M.Eng**. *Electronics with Mobile Communications*, University of Surrey, UK

- ***Grade***: 80.6% (Distinction)
- ***Final Year Project***: "Design and construction of a PC-Based Spectrum Analyser operating at the GSM band (890-960MHz)".
- ***Honours Awarded***: IEEE UK & RI Best Project in Telecommunications Prize, Certificate of Radio Frequency Engineering, Cyprus State Scholarship

Sept. 1998- Sept. 2001 **HND.** *Electrical and Electronic Engineering*, Higher Technical Institute, Cyprus

- ***Grade***: 92.12% (Distinction).
- ***Final Year Project***: "Mobile Communication Systems".
- ***Honours Awarded***: Presidential Prize, IEE Cyprus Prize, ΣΕΠΑΗΚ Prize, ΕΠΟΕΤ Prize, CyBC Prize.

OTHER EDUCATION

26-10-2021 **Fellow of the Higher Education Academy (FHEA)**

Sept. 2015- June 2016 **Certificate** in Higher Education Teaching Toolkit
University of Central Lancashire, Preston

RESEARCH INTERESTS

- Telecommunications – Wireless and Mobile Communications
- Indoor Positioning/Localization/Tracking
- Radio Propagation/Radio Planning/ Wireless Channel Modelling
- Human Exposure to Electromagnetic Radiation
- Internet of Things (IoT)
- Innovation and Entrepreneurship

PHD STUDENTS

- Theodosis Pasiali - Reconfigurable Intelligent Surfaces (RIS) and their Control Using Embedded Systems and Optimization Techniques for modern communication systems (2025 – present)
- Andrey Sesyuk – 3D Indoor Navigation and Tracking for the Internet of Things (2020-2024)

SCHOLARSHIPS

- **University of Surrey, Sept. 2004**
  University Research Scholarship (URS) – Full Scholarship (3 years) awarded by the University of Surrey to study for the degree of Doctor of Philosophy. Awarded based on exceptional performance during the M.Sc degree.

- **Cyprus State Scholarship Foundation, Sept. 2002**
  3-year Scholarship for Undergraduate studies in the UK, awarded based on exceptional performance during the HND degree at the Higher Technical Institute.

RESEARCH PROJECTS

A.	UCLAN CYPRUS	Funding Received
1.	**PREVENT– Prevention of natural disasters using deep technology for advanced HEI curricula** ▪ Dates: January. 2024 – December 2025 (24 Months) ▪ Funding Body: Erasmus+ (KA220-HED - Cooperation partnerships in higher education) ▪ Total Budget: €400,000 ▪ Description: The project aims to promote environmental sustainability and digital education among universities by raising awareness about environmental issues and climate change and how PLCs, robotics, and drones can eliminate the challenges related to natural disasters. ▪ Partners: **University of Halmstad (SWE),** UCLan Cyprus (CY), Citizens in Power (CY), University of Patras (GR), University of West Macedonia (GR), Helix-Connect (RO), University of Vigo (ESP)	€46,340
2.	**HEIght– Higher Education Innovation Growth and Training: heightening sustainable innovation in our HEIs and societies (PHASE 2)** ▪ Dates: January. 2022 – June 2023 (18 Months) ▪ Funding Body: EIT ▪ Total Budget: €800,000 ▪ Description: HEIght, is an initiative of a pan-European consortium of four forward-thinking higher education institutions and one actor from another side of the Knowledge Triangle leveraging existing innovation and entrepreneurial knowledge of all the partners to spur on growth of the sustainable innovation in our communities and in our institutions. HEIght delivers a vision of prosperous, inclusive and climate-resilient societies where food systems and other areas of human activity that are sustainable, trusted and healthy contribute to net zero carbon emission economies. Through training, designed and tailored to developing innovation and enterprise, these activities support the development of academic and non-academic staff and students. Through this project HEIs develop capacity in innovation and enterprise and a train-the-trainers method will ensure exponential growth of academic and non academic expertise and skills to support capacity building of innovative and entrepreneurial staff and students to effect great societal innovation.	€121,000
3.	**HEIght– Higher Education Innovation Growth and Training: heightening sustainable innovation in our HEIs and societies (PHASE 1)** ▪ Dates: July. 2021 – December 2021 (6 Months) ▪ Funding Body: EIT ▪ Total Budget: €800,000 ▪ Description: HEIght, is an initiative of a pan-European consortium of four forward-thinking higher education institutions and one actor from another side of the Knowledge Triangle leveraging existing innovation and entrepreneurial knowledge of all the partners to spur on growth of the sustainable innovation in our communities and in our institutions. HEIght delivers a vision of prosperous, inclusive and climate-resilient societies where food systems and other areas of human activity that are sustainable, trusted and healthy contribute to net zero carbon emission economies. Through training, designed and tailored to developing innovation and enterprise, these activities support the development of academic and non-academic staff and students. Through this project HEIs develop capacity in innovation and enterprise and a train-the-trainers method will ensure exponential growth of academic and non academic expertise and skills to support capacity building of innovative and entrepreneurial staff and students to effect great societal innovation.	€51,000

4.	<u>IREEDER – Introducing Recent Electrical Engineering Developments into undErgraduate cuRriculum</u> ▪ *Dates*: Nov. 2019 - 2022 (36 Months) ▪ *Funding Program*: Call: EAC/A03/2018 :EPP-CBHE-JP ▪ *Funding Body*: Erasmus+ ▪ *Total Budget:* €768,627 ▪ *Description*: The main objective of the IREEDER project is to improve the capacity of high education, using state of the art technology and training staff on improving the quality of the materials taught by making best use of these technologies. The developed subjects will be oriented towards the recent technologies in electrical engineering including Renewable Energy, Internet of Things and Communication Systems, in addition to their different applications. All these subjects will be in accordance with EU requirements.. ▪ *Partners:* Al-Hussein Bin Talal University (Jordan) - Coordinator, Mutah University (Jordan), Tafila Technical University (Jordan), Princess Sumaya University for Technology (Jordan), Philadelphia University (Jordan), Isra University (Jordan), Universita degli Studi di Trento (Italy), University of Central Lancashire Cyprus (Cyprus), , The University of Patras (Greece), Universidade De Vigo (Spain).	€42,557
5.	<u>RSE – Responsible Smart Environments</u> ▪ Dates: Jan 2019 – Dec 2020 ▪ *Funding Body*: UCLan UK: Centre for Sustainable Transitions ▪ *Total Budget:* €5,663 ▪ *Description*: Responsible research and innovation (RRI) is an approach that assesses potential implications and societal expectations related to research and innovation, aiming to foster the design of ethical, inclusive and sustainable research and innovation. Informed by RRI, the project focuses on empirical data collection to support the development of a set of guidelines for the implementation and use of smart environments that employ the technology of the Internet-of-Things (IoT) ▪ *Partners:* UCLan Cyprus, UCLan UK	€5,663
B.	**Interdisciplinary Science Promotion &Innovative Research Exploration Centre (INSPIRE)**	
1.	<u>ERMIS: AdvancemEnts in 3D IndooR Positioning Methods and ApplicatIons for Next-Gen Communication Systems</u> ▪ *Dates: May 2025-April 2027* ▪ *Funding Programme: EXCELLENCE/0524 – Excellence Hubs* ▪ *Funding Body: Research and Innovation Foundation* ▪ *Partners: INSPIRE, CYENS* ▪ *Total Budget: €249.930,32* ▪ *Description: ERMIS's vision is to advance the state of the art in 3D positioning by designing, developing, and validating new 3D positioning techniques utilising the most up-to-date wireless technologies and networks while demonstrating the positioning applicability and importance in various modern applications and systems. The choice of the technology and the positioning approach are typically a trade-off between accuracy, cost, complexity, technological maturity, and efficiency. For this reason, in ERMIS we consider various modern technologies and approaches to develop techniques covering all the possible choices an application developer would like to consider when implementing a location-based system or application. The*	€171,770

	project aims to advance the state of the art and develop prototypes that will be validated in the lab reaching a technology readiness level 4. ▪ *Role:* ***Coordinator***	
2.	<u>THESIS: THree dimEnSIonal millimeter-wave poSitioning</u> ▪ *Dates: May 2023-January 2024* ▪ *Funding Programme: CONCEPT/0722 – Proof of Concept* ▪ *Funding Body: Research and Innovation Foundation* ▪ *Partners: INSPIRE* ▪ *Total Budget: €39,952* ▪ *Description: THESIS vision is to demonstrate the ability and applicability of the millimetre-wave (mmWave) radio technology towards achieving high precision 3D positioning. mmWave technology is defining a new era in wireless communication by providing very wide bandwidths. It is currently being used in some Wi-Fi systems (e.g., IEEE802.11ad) and is planned to be used in 5G and beyond-5G communications in the near future as the it offers much more flexibility to use wider bandwidths and hence achieving much higher data rates and capacity.* ▪ *Role:* ***Coordinator***	€39,952
3	<u>DEMETRA: 3D Precision Farming using Internet of Things and Unmanned Aerial Vehicles in Greenhouses</u> ▪ *Dates: April 2023-December 2023* ▪ *Funding Programme: CONCEPT/0722 – Proof of Concept* ▪ *Funding Body: Research and Innovation Foundation* ▪ *Partners: INSPIRE* ▪ *Total Budget: €39,902* ▪ *Description: The general objective of this project is the adaptation of existing technologies used in a precision agriculture (PA), into an indoor (greenhouse) prototype system which includes the use of both an unmanned ground and aerial vehicles (UGV and UAV).* ▪ *Role:* ***WP Leader -Researcher***	€39,902
4	<u>OpTec E-Charge - Optimized and Innovative Techniques for Energy-efficient operation of Electric Car Chargers</u> ▪ *Dates: Dec. 2022 – June 2023* ▪ *Funding Programme: Innovation Coupons* ▪ *Funding Body: Research and Innovation Foundation* ▪ *Partners: INSPIRE, BlueSun Automations Ltd* ▪ *Total Budget: €5,000* ▪ *Description: This project is in collaboration with the industry, Blue Sun Automations which is based in Nicosia, Cyprus. The title is Optimized and Innovative Techniques for Energy efficient operation of Electric Car Chargers (OpTec E-Charge). The goal is to study the performance of various chargers for electric cars.* ▪ *Role:* ***Researcher***	€5,000
C.	SIGINT SOLUTIONS LTD	
1.	<u>TruNet – 3D Wireless Network Planning Simulator</u> ▪ *Dates*: Jan. 2013 - Dec. 2014 (24 Months) ▪ *Funding Program*: Industrial Funding Schemes 2007-2013 ▪ *Funding Body*: Ministry of Energy, Commerce, Trade and Tourism, Cyprus ▪ *Description*: Design, Implementation and commercialization of a 3D Wireless Network Simulator. TruNet, is a 3D wireless network planning simulator based on a custom-developed Electromagnetic engine developed in-house.	€130,857

	▪ *Role*: **Project Coordinator.** Coordinated the design and development of the simulator in .NET framework. The product is expected to be launched as a company commercial product internationally in the first half of 2015.	
2.	**WHERE-2 – *Wireless Hybrid Enhanced Radio Estimators 2*** ▪ *Dates*: July 2010 – June 2013 (36 Months) ▪ *Funding Program*: FP7 ICT 2009 ▪ *Funding Body*: European Commision ▪ *Total Budget:* 7.45 MEuros ▪ *Partners:* Sigint Solutions Ltd. (CY), German Aerospace Center (DLR), Institute of Communications and Navigation (DE), Aalborg University (DN), Advanced Communications Research&Development S.A. (ES), Commissariat à L'Energie Atomique – LETI (FR), Institut Eurécom (FR), Siradel (FR), Université de Rennes 1 (FR), Instituto Telecomunicações (PT), Mitsubishi Electric ITE (FR), University of Surrey (UK), Universidad Politécnica de Madrid (SP), University of Alberta (CN), City University of Hong Kong (HK), Telefonica I+D (SP), OTE S.A (GR), University of Athens (GR), Portucal Telecom Inovacao S.A (PT) ▪ *Description*: The WHERE2 project addresses the combination of positioning and communications in order to exploit synergies and to enhance the efficiency of future wireless communications systems. ▪ *Role*: **Task Leader** and **Principal Investigator** in task T2.2 that investigated enhancements in localization precision through the development of advanced positioning algorithms by fusing together radio with non-radio context such as inertial sensor information and/or position constraints imposed by maps etc. Also lead specific tasks of the demonstration and proof of concept.	€271,125
3	**C2Power – *Cognitive Radio and Cooperative strategies for power saving in multi-standard wireless devices*** ▪ *Dates*: January 2010 – December 2012 (36 Months) ▪ *Funding Program*: FP7-ICT-2009-4 ▪ *Funding Body*: European Commission ▪ *Total Budget:* 3.45 MEuros ▪ *Partners:* Sigint Solutions Ltd, Instituto Telecomunicações (PT), Commissariat à L'Energie Atomique – LETI (FR), Portucal Telecom Inovacao S.A (PT), University of Surrey (UK), Center for Research and Telecomm. Experimentation for Networked Communities [CREATE-NET] (IT), Wroclawskie Centrum Badan EIT+ SP ZO.O (PL), EADS Defence and Security Systems (FR), Veebeem (UK), LANTIQ Deutschland GmbH (DE) ▪ *Description*: C2POWER main objective was to research, develop and demonstrate energy saving technologies for multi-standard wireless mobile devices, exploiting the combination of cognitive radio and cooperative strategies while still enabling the required performance in terms of data rate and QoS to support active applications. ▪ *Role*: **Work Package Leader** and **Principal Investigator** in the Work Package (WP6) that investigated, implemented and demonstrated novel context-aware energy efficient vertical and horizontal handover algorithms through a custom-developed test-bed.	€342,510
4	**CogEU – COGnitive radio systems for efficient sharing of TV white spaces in EUropean contex** ▪ *Dates*: January 2010 – December 2012 (36 Months)	€356,715

	▪ *Funding Program*: FP7-ICT-2009-1.1 ▪ *Funding Body*: European Commission ▪ *Total Budget:* 5.1 MEuros ▪ *Partners:* Sigint Solutions Ltd (CY), Instituto Telecomunicações (PT), Thales (FR), Portucal Telecom Inovacao S.A (PT), Trinity College (IR), University of Aegean (GR), Poznan University of Technology (PL), Institut für Rundfunktechnik (DE), Rohde & Schwarz (DE), Towercom A. S (SLO) ▪ *Description*: COGEU was a composite of technical, business, and regulatory/policy domains, with the objective of taking advantage of the TV digital switch-over (or analogue switch-off) by developing cognitive radio systems that leverage the favourable propagation characteristics of the TVWS through the introduction and promotion of real-time secondary spectrum trading and the creation of new spectrum commons regime. ▪ *Role*: Work Package (WP5) Leader and Principal Investigator in the WP that developed an experimental cognitive radio emulator to evaluate the interference between DVB-T systems and systems that are expected to use TV White Spaces (TVWS).	
5	*LOCME – Localization of Mobile Terminals* ▪ *Dates*: Oct. 2011 - Sept 2013 (24 Months) ▪ *Funding Program*: ΤΠΕ/ΕΠΙΚΟΙ/0609(ΒΙΕ) ▪ *Funding Body*: Cyprus Research Promotion Foundation ▪ *Total Budget:* 164,736 Euros ▪ *Partners:* Sigint Solutions (CY), Open University of Cyprus (CY), University of Cyprus (CY) ▪ *Description*: To investigate and develop advanced positioning algorithms by utilizing the building geometry extracted from satellite imagery. ▪ *Role*: Task leader and Principal Investigator in the task that developed advanced fingerprinting positioning algorithms. Also coordinated the works for the development of a Mobile Android Application for the demonstration of the proof of concept.	€74,026
6	*MOBILIA – Mobility concepts for IMT-Advanced. Networks* ▪ *Dates*: December 2008– December 2010 (24 Months) ▪ *Funding Program*: EUREKA CELTIC ▪ *Funding Body*: Cyprus Research Promotion Foundation ▪ *Total Budget:* 1.9 MEuros ▪ *Partners:* TTI Telecom (ES), CTTC (ES), Creativ IT (ES), TST Sistemas (ES), Universidad Cantabria (ES), Instituto de Telecommunicacoes (PT), Wavecom (PT), Sigint Solutions Ltd (CY) ▪ *Description*: MOBILIA targeted ITU IMT-advanced requirements for future wireless systems, i.e. peak data rates of 100 Mbps for mobile applications and 1 Gbps for low mobility. The IMT-advanced vision of future network as being formed of interworking access systems was also considered. A derived target was to obtain an increased aggregate throughput/user satisfaction vs. existing systems. ▪ *Role*: Technical Coordinator at a National level (local consortium). At an international level, I was the Task Leader and Principal Investigator of a task that investigated cooperative relaying and capacity improvements by utilizing Distributed MIMO technologies. A MIMO capacity module has been developed as add-on functionality to Sigint's simulator (TruNET)	€275,126

7	***FUTON - Fibre Optic Networks for Distributed, Extensible HeterogeneousRadio Architectures and Service provisioning*** ▪ *Dates*: January 2008 – Sep 2010 (30 Months) ▪ *Funding Program*: FP7-ICT-2007 ▪ *Funding Body*: European Commission ▪ *Total Budget:* 9.85MEuros ▪ *Partners:* Nokia Siemens Networks (PT), Instituto de Telecomunicações (PT), Alcatel - Thales III - V Labs (FR), CEA-LIST (FR), Portugal Telecom Inovação (PT), VIVO (BR), OTE Research (GR), ACORDE (ES), Wavecom (PT), Sigint Solutions Ltd (CY), University of Kent (GB), University of Patras (GR), Technical University of Dresden (DE), Valtion teknillinen tutkimuskeskus (FI), National Institute of Information and Communications Technology (KO). ▪ *Description*: FUTON aimed to research, develop and validate a flexible architecture for wireless systems based on the joint processing of the radio signals from distinct remote antenna units and supported by a transparent fibre infrastructure. This architecture enables the high bit rates targeted in the broadband component of future wireless systems and provides a framework for the integration of heterogeneous wireless systems. ▪ *Role*: Acted as Work Package Leader of WP4 which designed and implemented a middleware platform based on Mobile-IP principles which performs vertical handovers between heterogeneous radio technologies in order to demonstrate seamless communication between heterogeneous networks.	€349,120
8	***WHERE - Wireless Hybrid Enhanced Radio Estimators*** ▪ *Dates*: January 2008 – December 2010 (36 Months) ▪ *Funding Program*: FP7 ICT 2007-1 ▪ *Funding Body*: European Commission ▪ *Total Budget:* 5.5 MEuros ▪ *Partners:* German Aerospace Center (DE), Aalborg University (DN), Advanced Communications Research&Development S.A. (ES), Commissariat à L'Energie Atomique – LETI (FR), Institut Eurécom (FR), Siradel (FR), Université de Rennes 1 (FR), Instituto Telecomunicações (PT), Mitsubishi Electric ITE (FR), Sigint Solutions Ltd. (CY), University of Surrey (UK), Universidad Politécnica de Madrid (ES), University of Alberta (CA), City University of Hong Kong (HK) ▪ *Description*: The main objective of WHERE was to combine wireless communications and navigation for the benefit of the ubiquitous access for a future mobile radio system. The impact is manifold, such as real time localization knowledge in B3G/4G systems allows to increase efficiency in various ways. ▪ *Role*: Acted as Task Leader and Principal Investigator of the task that produced radio propagation predictions through Ray tracing, feeding this data into advanced radio location estimators. Also involved in the investigation of the accuracy of fingerprinting positioning when Ray tracing is used to calculate the fingerprinting maps, considering various uncertainties in the definition of the environment to be simulated.	€179,630
9.	***4GOpen -Optimization and Convergence for Next Generation Networks*** ▪ *Dates*: May 2009 – October 2011 (30 Months) ▪ *Funding Program*: EUREKA-EUROSTARS ▪ *Funding Body*: Cyprus Research Promotion Foundation ▪ *Partners:* Sigint Solutions (CY), Wavecom (PT)	€205,880

	▪ *Description*: To interconnect two simulators working on different communication layers and to compare the output with real measurements. Simulators were geographically separated and have been interconnected through TCP/IP. ▪ *Role*: Research Associate. Contributed in the integration of a physical layer (channel prediction) with a link layer simulator from Wavecom.	
10	***ASPIDA - Security in Sensor Network*** ▪ *Dates*: December 2006 – December 2010 (48 Months) ▪ *Funding Program*: Research for new Researchers (ΠΕΝΕΚ) ▪ *Funding Body*: Cyprus Research Promotion Foundation ▪ *Partners:* Sigint Solutions, University of Cyprus, University of Piraeus ▪ *Total Budget:* 214,412 Euros ▪ *Description*: To design and develop a prototype of a security layer that will offer security services to sensor nodes ▪ *Role*: Project Coordinator. Principal Investigator was Dr. Eliana Stavrou.	115,458
D.	UNIVERSITY OF SURREY	
1.	***Optimising Radio Tactical Positions*** ▪ *Funding Body*: Defence Science and Technology Laboratory (DSTL) – British Ministry of Defence ▪ *Role*: Research Associate. Participated to the radio measurement campaigns.	N/A
2.	***Electromagnetic Propagation in Complex Aircraft Environments*** ▪ *Funding Body*: Rolls-Royce ltd. ▪ *Role*: Research Associate. Participated to the radio measurement campaigns in emulated aircraft engine environments to evaluate transmission losses through the aircraft body.	N/A

INDUSTRIAL PROJECTS

1. EMF Measurement Campaigns to evaluate Human Exposure to Electromagnetic Radiation from MTN's Base Stations (~600 base stations)
    - Duration: 2009-2011, 2014-2015 (7 rounds of periodic 6-month measurements)
    - Role: Project Manager.
2. EMF Measurement Campaigns to evaluate Human Exposure to Electromagnetic Radiation from CYTA's Base Stations (~600 base stations)
    - Duration: 2013-2014 (4 rounds of periodic 6-month measurements)
    - Role: Project Manager.
3. EMF Measurement Campaigns to evaluate Human Exposure to Electromagnetic Radiation from CyBC Stations (~10 Antenna stations)
    - Duration: 2014 (2 rounds of periodic 6-month measurements)
    - Role: Project Manager.

TEACHING

A. UNIVERSITY OF CENTRAL LANCASHIRE

Coordinated, Developed and Taught the following Postgraduate Courses:

- *EL1785: Electronics and Instrumentation*

- *EL2006: Data Communications*
- *CO2403: Professional Skills*
- *CO3509: Network Design and Management*
- *CO3514: Wireless and Mobile Networks*
- *EL3801: Wireless, Mobile and Fibre Optic Communication*
- *EL3807: Mobile Technologies*
- *EL3808: Digital Communications*
- *EL3995: Undergraduate and Postgraduate Projects Supervision*
- *EL3996: Engineering Professionalism*

B. OPEN UNIVERSITY OF CYPRUS

Coordinated, Developed and Taught the following Postgraduate Courses:

- *PES 513: Communication Networks (Spring Semester 2012-13 and 2013-14, Autumn 2016-17)*
- *SAE 511: Digital Communications (Autumn Semester 2014-2015, Autumn 2017-18)*
- *PES 612: Mobile and Ubiquitous Computing (Spring Semester 2012-2013)*
- *SAE 700: Supervision of Postgraduate Dissertations*

C. UNIVERSITY OF SURREY

Teaching Assistant in:

- *Antennas and Propagation (2004-2005)*
- *Mobile and Personal Communications (2004-2005)*
- *Supervision of Postgraduate and Undergraduate Projects (2004-2006)*

PUBLICATIONS

JOURNALS

J1. I. Ioannou, **M. Raspopoulos**, P. Nagaradjane; C. Christophorou, A. Gregoriades, V. Vassiliou, "Access Point Selection and Localization for Cluster-Based Realization of a Device-to-Device Cell-Free 6G Communications Network," in IET Communications [To be published]

J2. L. Nisiotis, A. Anikina and **M. Raspopoulos**, "The Development of a VR Wireless Signal Propagation Simulator in Unreal Engine. A Device and Performance Testing," in IT Professional [In Press]

J3. I. Ioannou; **M. Raspopoulos**; P. Nagaradjane; C. Christophorou,W. A. Aziz, V. Vasiliou, A. Pistillides, "DeepRISBeam: Deep Learning-based RIS Beam Management for Radio Channel Optimization," *in IEEE Access*, **2024** doi: 10.1109/ACCESS.2024.3411929.

J4. A. Sesyuk, S. Ioannou and **M. Raspopoulos**, "Radar-Based Millimeter-Wave Sensing for Accurate 3-D Indoor Positioning: Potentials and Challenges," in *IEEE Journal of Indoor and Seamless Positioning and Navigation*, vol. 2, pp. 61-75, **2024**, doi: 10.1109/JISPIN.2024.3359151

J5. A. Sesyuk, S. Ioannou, and **M. Raspopoulos**, "A Survey of 3D Indoor Localization Systems and Technologies," Sensors, vol. 22, no. 23, p. 9380, Dec. **2022**, doi: 10.3390/s22239380.

J6. **M. Raspopoulos**, "Multi-Device, Map-constrained, Fingerprint-based Indoor Positioning using Ray Tracing", In:. *IEEE Transactions on Instrumentation and Measurement*, Volume: 67 , Issue: 2, pp. 466-476 , Feb. **2018**, DOI: 10.1109/TIM.2017.2774181

J7. Paspallis, **M. Raspopoulos**, "An Open Platform for Studying and Testing Context-Aware Indoor Positioning Algorithms". *In: Goluchowski J., Pankowska M., Linger H., Barry C., Lang M., Schneider C. (eds) Complexity in Information Systems Development. Lecture Notes in Information Systems and Organisation*, vol 22, pp 39-50. Springer, Cham, **2017**

J8. **M. Raspopoulos**, S. Stavrou, "Frequency Selective Buildings through Frequency Selective Surfaces", *IEEE Trans. on Antennas and Propagation*., Vol. 59, Issue 8, pp. 2998-3005, Aug. 2011.

J9. **M. Raspopoulos**, P. King, S.Stavrou, "Capacity of MIMO Systems in FSS environments", *IET Electronic Letters*,Vol. 44, Issue 4, pp 304-305, Feb. **2008**.

J10. **M. Raspopoulos**, S. Stavrou, "Frequency Selective Surfaces on Building Materials – Air gap Impact", *IET Electronic Letters*, Vol. 43, Issue 13, pp. 700-702, June **2007**.

J11. **M. Raspopoulos**, F. A. Chaudhry, S. Stavrou, "Radio Propagation in Frequency Selective Buildings", *European Transactions in Telecommunications*, Vol. 17, pp. 407-413, Mar. **2006**.

CONFERENCES

C1. I. Ioannou, C. Christophorou, C. Politi, S. Denazis, **M. Raspopoulos** and V. Vassiliou,"A Deep Q-Network (DQN) Framework for Joint Optimization of EV Charging Station Placement and Vehicle Routing," 2025 IEEE International Smart Cities Conference (ISC2-2025) , Patras, Greece, 6-9 October, 2025. [Accepted - To be presented]

C2. **M. Raspopoulos**, I. Ioannou, L. Nisiotis. "mmWave-based Crowd Sensing for Metaverse Applications", *IEEE International Symposium on Emerging Metaverse (ISEMV 2025)*, Honolulu, Hawaii, USA, October 2025 [Accepted - To be presented]

C3. L. Nisiotis, N. Markov, C. Nikolaou, A. Hadjiliasi, **M. Raspopoulos**. "Enhancing Digital Heritage Experiences: Evaluating Fine-Tuned LLM Integration within a Cyber-Physical-Social Virtual Museum System", *IEEE International Symposium on Emerging Metaverse (ISEMV 2025)*, Honolulu, Hawaii, USA, October 2025 [Accepted - To be presented]

C4. **M. Raspopoulos**, A. Sesyuk, I. Ioannou, "3D millimeter-Wave Multi-Target Sensing", *The 15th International Conference on Indoor Positioning and Indoor Navigation*, September 2025, Tampere, Finland [Accepted -To be presented]

C5. I. Ioannou, A. Gregoriades, C. Christophorou, **M. Raspopoulos** and V. Vassiliou, "Implementing a Cell-Free 6G Distributed AI Network With the Use of Deep ML Under a Traditional Multi-Cell Mobile Network," *2025 5th IEEE Middle East and North Africa Communications Conference (MENACOMM)*, Byblos, Lebanon, 2025, pp. 1-8, doi: 10.1109/MENACOMM62946.2025.10910986.

C6. I. Ioannou, **M. Raspopoulos**, P. Nagaradjane, C. Christophorou, A. Khalifeh and V. Vassiliou, "Optimization of the D2D Topology Formation Using a Novel Two-Stage Deep ML Approach for 6G Mobile Networks," ***2024*** *Asian Conference on Communication and Networks (ASIANComNet)*, Bangkok, Thailand, 2024, pp. 1-9, doi: 10.1109/ASIANComNet63184.2024.10811034

C7. A. Sesyuk, S. Ioannou and **M. Raspopoulos**, "3D millimeter-Wave Sensing vs Ultra-Wideband Positioning," *2024 14th International Conference on Indoor Positioning and Indoor Navigation (IPIN)*, Hong Kong, October 2024.

C8. L. Nisiotis, A. Anikina and M. Raspopoulos, "Exploring Gaming Technologies, Digital Twins, and VR to Visualise Wireless Propagation Simulations," *2024 IEEE 48th Annual Computers, Software, and Applications Conference (COMPSAC)*, Osaka, Japan, 2024, pp. 656-661, doi: 10.1109/COMPSAC61105.2024.00094.

C9. I. Ioannou, M. Savva, M. Raspopoulos, C. Christophorou and V. Vassiliou, "Revolutionising IoT Network Security By Assessing ML Localisation Techniques Against Jamming Attacks," *2024 22nd Mediterranean Communication and Computer Networking Conference (MedComNet),* Nice, France, 2024, pp. 1-10, doi: 10.1109/MedComNet62012.2024.10578201.

C10. A. Sesyuk, S. Ioannou and **M. Raspopoulos**, "3D millimeter-Wave Indoor Localization," 2023 *13th International Conference on Indoor Positioning and Indoor Navigation (IPIN)*, Nuremberg, Germany, **2023**, pp. 1-7, doi: 10.1109/IPIN57070.2023.10332537.

C11. J. Ye, S. Ioannou, P. Nikolaou and **M. Raspopoulos**, "CNN based Real-time Forest Fire Detection System for Low-power Embedded Devices," *2023 31st Mediterranean Conference on Control and Automation (MED), Limassol*, Cyprus, 2023, pp. 137-143, doi: 10.1109/MED59994.2023.10185692.

C12. C. Laoudias, **M. Raspopoulos**, S. Christoforou and A. Kamilaris, "Privacy-Preserving Presence Tracing for Pandemics Via Machine-to-Machine Exposure Notifications," 2022 23rd IEEE International Conference on Mobile Data Management (MDM), 2022, pp. 355-360, doi: 10.1109/MDM55031.2022.00080.

C13. S. Ioannou, M. C. Argyrou, P. Christodoulides, **M. Raspopoulos**, M. Darwish and C. C. Marouchos, "Modulation Processes and Mathematical Models of the TCR," 2021 International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 2021, pp. 1-5, doi: 10.1109/ICECCME52200.2021.9591093.

C14. S. Ioannou, S. Hirodontis, **M. Raspopoulos**, An Adaptive Load Shedding Method for Blackout Prevention in Active Distribution Networks, 12th Mediterranean Conference on Power Generation, Transmission , Distribution and Energy Conversion (MEDPOWER2020), Paphos, Cyprus, November 2020.

C15. S. Ioannou, S. Hirodontis, **M. Raspopoulos**, Load Shedding Schemes for Islanding Distribution Network Operation, 12th Mediterranean Conference on Power Generation, Transmission , Distribution and Energy Conversion (MEDPOWER2020), Paphos, Cyprus, November 2020.

C16. **M. Raspopoulos**, N. Paspallis, P. Kaimakis "PINSPOT: An oPen platform for INtelligent context-baSed Indoor POsiTioning". In: 18th International Conference on Information Systems Development (ISD2019), Tulon, France, 28-30 August 2019

C17. N. Paspallis , I. Polycarpou , P. Andreou , J. Antoniou , P. Kaimakis, **M. Raspopoulos** and M. Terzi (2018). An Experience Report on the Effectiveness of Five Themed Workshops at Inspiring High School Students to Learn Coding. In: 23rd Annual ACM Conference on Innovation and Technology in Computer Science Education, July 2-4, 2018, Pyla, Cyprus.

C18. Nearchos Paspallis, **Marios Raspopoulos**, "An Open Platform for Studying and Testing Context-Aware Indoor Positioning Algorithms", *25th International Conference on Information Systems Development (ISD2016)*, Katowice, Poland, August 24-26, 2016, pp. 314-321

C19. Andreou, Panayiotis and **Raspopoulos, Marios**, "Active Life Coach: Towards a Framewo rk for Holistic Care of Citizens as They Age" (2016). *MCIS 2016 Proceedings.* Paper 42. http://aisel.aisnet.org/mcis2016/42

C20. L. Kanaris, A. Kokkinis, **M. Raspopoulos**, A. Liotta and S. Stavrou, "Improving RSS fingerprint-based localization using directional antennas," *Antennas and Propagation (EuCAP), 2014 8th European Conference on,* pp. 1593-1597, The Hague, April 2014.

C21. A. Kokkinis, L. Kanaris, **M. Raspopoulos**, A. Liotta and S. Stavrou, "Optimizing route prior knowledge for map-aided fingerprint-based positioning systems," *Antennas and Propagation (EuCAP), 2014 8th European Conference on*, pp. 2141-2144, The Hague, April 2014.

C22. Kokkinis, **M. Raspopoulos**, L. Kanaris, A. Liotta, S. Stavrou, "Map-Aided Fingerprint-based Indoor Positioning", *IEEE 24th International Symposium on Personal, Indoor and Mobile Radio Communications (PIMRC'13)*, pp. 270-274, London, Sept. 2013

C23. I. Arambasic,J. Casajus, I. Raos, **M. Raspopoulos**, S. Stavrou, "Anchor-less Self-Positioning in Rectangular Room Based on sectorized Narrowband Antennas", *19th European Wireless Conference 2013*, pp. 1-6, Guildford, UK, April 2013

C24. L. Kanaris, A. Kokkinis, A. Liotta, **M. Raspopoulos**, S. Stavrou, "A Binomial Distribution Approach for the Evaluation of Indoor Positioning Systems",*20th International Conference on Telecommunications*, pp.1-4,Casablanca, Morocco, May 2013

C25. I. Arambasic, **M. Raspopoulos**, J. Casajus Quiros, I. Raos, S. Stavrou, "Self Positioning and mapping or rectangular rooms with sectorized narrowband antennas", *SoftCOM 2012*, pp.1-4, Split, September 2012

C26. M. Laaraiedh, B. Uguen, J. Stephan, Y. Corre, Y. Lostanlen, **M. Raspopoulos**, S. Stavrou, "Ray Tracing-Based Radio Propagation Modeling for Indoor Localization Purposes", *The International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (IEEE CAMAD 2012)*, pp.276-280, Barcelona, Sep. 2012.

C27. **M. Raspopoulos**, C. Laoudias, L. Kanaris, A. Kokkinis, C. Panayiotou, S. Stavrou, "Cross Device Fingerprint-based Positioning using 3D Ray Tracing", *The 8th International Workshop on Communications and Mobile Computing (IWCMC 2012)*, pp. 147-152, Limassol, August 2012.

C28. I. Arambasic, J. Casajus, B. Denis, M. D. Noes, M.Laaraiedh, B. Uguen, J.n, Y. Lostanlen, **M. Raspopoulos**, S. Stavrou, J. Nielsen, T. K. Madasen, D. M. Condeco, R. Raulefs, " Context-Awareness and Self-Localization in Wireless Networks: The WHERE2 Proposals", *ICT-Future Network and MobileSummit 2012*, Berlin,Germany, July 2012

C29. **M. Raspopoulos**,B. Denis,M. Laaraiedh,J. Domınguez,L. de Celis,D. Slock,G. Agapiou,J. Stephan,S. Stavrou, "Location-Dependent Information Extraction for Positioning", *International Conference on Localization and GNSS*, pp 1-6, Starnberg, June 2012.

C30. **M. Raspopoulos**, C. Laoudias, L. Kanaris, A. Kokkinis, C. Panayiotou, S. Stavrou, "3D Ray Tracing for device-independent fingerprint-based positioning", *Proc. of 9th Workshop in Positioning Navigation and Communications 2012 (WPNC2012)*, pp.109-113, Dresden, Germany, 16 March 2012

C31. J.Bastos, V. Monteiro, J. Rodriguez, R. Aguero, D. Gomez, Y. Fernandez, M. Pena, F. Baber, C. Verikoukis, J. Herrero, B. Cendon, **M. Raspopoulos**, S. Stavrou, M. Cabanas, J. Sainz, M. R. Santos, "Mobility concepts for IMT-Advanced", MOBIMEDIA 2010, *Proc. of 6th International ICST Conf. on Mobile Multimedia Comms.*, Lisbon, pp. 6-8 Sept 2010

C32. **M. Raspopoulos**, S.Stavrou, "Capacity Assessment in Distributed MIMO in outdoor environments using deterministic channel Modelling", *MOBIMEDIA 2010, Proc. of 6th International ICST Conf. on Mobile Multimedia Comms.*, pp. 6-8 , Lisbon, Sept 2010

C33. F. A. Chaudhry, **M. Raspopoulos**, S. Stavrou, "Effect of Frequency Selective Surfaces on radio wave propagation in indoor environments", *11th European Wireless Conf. 2005*, Nicosia, Cyprus, Vol. 2, pp. 732-736, April 2005. (Best Paper Award)

C34. J. Rodriguez, P. Marques, A. Radwan, K. Moessner, R. Tafazolli, **M. Raspopoulos**, S. Stavrou, P. Trapps, D. Noquet, K. Sithamparanathan, Á.Gomes, R. Piesiewicz, H. Mokrani, A. Foglar , C. Verikoukis, Cognitive radio and cooperative strategies for power saving in multi-standard wireless devices, *ICT Mobile Summit 2010*, Florence, June 2010.

BOOKS/BOOK CHAPTERS

B1. Co-Editor of Advances in Information Systems Development: Methods, Tools and Management, Lecture Notes in Information Systems and Organisation, Springer, 2018, ISBN 978-3-319-74817-7

B2. Co-author of chapter "Showcasing 5G Handsets" in "Energy Efficient Smart Phones for 5G Networks", ISBN 978-3-319-10313-6, Springer, Nov. 2014

B3. Co-author 'Influence of the propagation channel on satellite communications - channel dynamics effects on mobile, fixed and optical multimedia applications', written during EU IST FP6 SatNEx project: Satellite Communications Network of Excellence. ISBN 978-3-8322-6904-3, 2008.

ACCADEMIC AWARDS AND HONOURS

- **August 2016: Best Paper Award**. Awarded in the 25th International Conference on Information Systems Development (ISD2016), Katowice, Poland for the paper: "*An Open Platform for Studying and Testing Context-Aware Indoor Positioning Algorithms*".

- April 2005: ***Best Paper Award***. Awarded in the 11th European Wireless Conference in Nicosia, Cyprus for the paper: "*Effect of Frequency Selective Surfaces on radio wave propagation in indoor environments*".

- September 2004: ***The Cable and Wireless Prize***. Awarded by the Department of Electronic Engineering at the University of Surrey, UK for the best overall performance from a full-time student graduating with an MSc in Satellite Communications Engineering or Communications Networks and Software.

- September 2004: ***The MSc Advisory Board Prize***. Awarded by the Department of Electronic Engineering at the University of Surrey, UK for the best project by a full-time student graduating with an MSc (taught program).

- June 2003: ***Certificate of Radio Frequency Engineering***. Awarded by the Department of Electronic Engineering at the University of Surrey, UK.

- June 2002: ***IEEE UK&RI Project Prize***: Certificate of Merit awarded for the best final-year undergraduate project in the Telecommunications area by the IEEE United Kingdom and the Republic of Ireland - Communications Chapter.

- June 2001: ***Presidential Prize*** for the highest overall performance at the Higher Technical Institute. Awarded by the President of the Republic of Cyprus Mr. Glafkos Clerides.

- June 2001: ***IEE Cyprus Prize***: Certificate of Merit for the highest overall performance in all subjects studied in the Electrical Engineering course at the Higher Technical Institute. Awarded by the Institution of Electrical Engineers Cyprus (IEE Cyprus).

- June 2001: ***ΣΕΠΑΗΚ Prize***: Certificate of Merit for the best performance in Electrical Power subjects at the Higher Technical Institute. Awarded by the Electricity Authority of Cyprus (EAC) Professional Employees Union.

- June 2001: ***ΕΠΟΕΤ Prize***: Certificate of Merit for the best performance in Electronic Engineering subjects at the Higher Technical Institute. Awarded by the Free Pancyprian Organization of Telecommunication Employees.

- June 2001: ***CyBC Prize***: Certificate of Merit for the best project in Electronic Engineering at the Higher Technical Institute. Awarded by the Cyprus Broadcasting Corporation.

PROFESSIONAL MEMBERSHIPS

- Member in the Cyprus Scientific and Technical Chamber – ETEK (No. A090532)
- Member of the Institute of Electrical and Electronic Engineers -IEEE (No.91311193)

SERVICE

A. CONFERENCE ORGANIZATION

- Programme Co-Chair for the 26th International Conference on Information Systems Development, Larnaca-Cyprus (ISD2017)
- Workshops chair at the 10th EAI International Conference on Game Theory and Networks held online on the 16th of December 2021
- Publicity Chair to the IEEE ALIAS2022 Workshop held during the IEEE MDM2022 Conference
- Publicity Chair to the IEEE ALIAS2023 Workshop held during the IEEE MDM2023 Conference
-

B. REVIEWER

- IEEE Transactions on Antennas and Propagation.
- IEEE Communication Letters
- IET Circuits, Devices & Systems
- Springer Journals – Mobile Networks & Applications (MONE)
- Springer Journals – Wireless Networks (WINE)
- The Applied Computational Electromagnetics Society
- EURASIP Journal on Wireless Communications and Networking
- Progress in Electromagnetic Research (PIER) Journals

C. PhD EXAMINER

- February 2025: Juan José López Escobar, "Design of a new distributed Mist, Edge and Fog architecture in Beyond-5G environments for the Internet of Things", University of Vigo, Spain. (Chair)
- June 2016: Firooz Bashshi Saghezchi, "*Cooperative Strategies for Energy Efficiency in Multi-standard Wireless Devices*", University of Aveiro, Portugal. (Member)

D. TECHNICAL EXPERT

- EUROSTARS Technical Expert in the EUREKA Network
- Registered Expert in EC Research & Innovation Portal
- Approved Evaluator for the general secretariat of Research and Innovation in Greece

E. QUALITY ASSURANCE IN HIGHER EDUCATION EXPERT

- Chair of the Expert Group to Evaluate the Information Systems filed of study (2 Study programmes; 1 undergraduate and 1 postgraduate) at ISMA University in Riga Latvia and its overseas campus in Fergana, Uzbekistan on behalf of the Latvian Higher Education Quality Agency (AIKA). April 2024.

F. STANDARDIZATION

- Member of the Indoor Positioning Indoor Navigation (IPIN) International Standards Committee (ISC)

G. ADMINISTRATIVE/MANAGEMENT ROLES

- Chair of the Research Subcommittee, UCLan Cyprus (2021- Now)
- Chair of the Innovation and Enterprise Subcommittee, UCLan Cyprus (2019- 2021)
- Member of the Research and Innovation Committee, UCLan Cyprus (2015-Now)
- Electrical and Electronic Engineering Course Leader, UCLan Cyprus (2015-Now)
- Mentor in the RIEMT Mentoring Scheme (2015-Now)
- Member of the Teaching and Learning Committee, UCLan Cyprus (2018-2020)
- Innovation Champion for the School of Sciences, UCLan Cyprus (2015-2018)

H. OTHER

- Member of the Parallel Parliament on the Environment, Sustainability and Public Health
- Member of the National Committee on Open Science (Deputy Ministry of Research Innovation and Digital Policy)
- Member of the 5G Specialists Group formed by the Ministry of Health.

INDUSTRIAL PRODUCTS

- TruNET: I have provided the scientific and technical know-how and lead the software development activities in Sigint Solutions Ltd. for a 3D wireless network planning simulator (TruNET) based on a

custom-developed Electromagnetic engine, developed in-house. The simulator's standard output provides magnitude and phase information of the received electric field, Power Delay Profiles (PDP), Angle of Arrival (AoA), Angle of Departure (AoD) information, SNR, SNIR and C/I information. The simulator's core functionality is further extended through a number of telecommunication modules and connectors. Examples of these modules and connectors include MIMO modules, UWB modules, NS2/Matlab connectors for supporting higher OSI-layer simulations, WiFi/LTE modules, localisation modules etc. TruNET has been a company project since 2007, but it was also funded by the Industrial Funding Schemes 2007-2013 of the Ministry of Energy, Commerce, Trade and Tourism

- WiFi Exposure Meter: I have provided the technical knowhow and have been in charge the development of an Android Mobile Application which evaluates (against various recognised international limits) the human exposure to EMF radiation from Wi-Fi Access points. This application is already available on the Play Market (free and paid version).