Research interests
Next Generation PONs, MAC Protocols, 5G RANs, Optical/Wireless Convergence, SDN Cellular/Satellite IP Networks

Commercial and public engagement
Member of IEEE, IEEE Communications Society, IEEE Standards Association, Optical Society of America (OSA)

Recent Research Journals
Contactless Camera-Based Heart Rate and Respiratory Rate Monitoring Using AI on Hardware

Near-Field Terahertz Communications: Model-Based and Model-Free Channel Estimation

Cooperative RIS and STAR-RIS assisted mMIMO Communication: Analysis and Optimization

Terahertz-Band Channel and Beam Split Estimation via Array Perturbation Model

Vehicular networks for combating a worldwide pandemic: Preventing the spread of COVID-19

STAR-RIS Assisted Full-Duplex Systems: Impact of Correlation and Maximization

Anatomy of Deep Learning Image Classification and Object Detection on Commercial Edge Devices: A Case Study on Face Mask Detection

A Hybrid Architecture for Federated and Centralized Learning
Impact of Channel Aging on Reconfigurable Intelligent Surface Aided Massive MIMO Systems with Statistical CSI
15 p.

Joint Spatial Division and Multiplexing for FDD in Intelligent Reflecting Surface-assisted Massive MIMO Systems

Coverage Probability of STAR-RIS assisted Massive MIMO systems with Correlation and Phase Errors

Coverage Probability of Double-IRS Assisted Communication Systems

Scalable Cell-Free Massive MIMO Systems: Impact of Hardware Impairments

Asymptotic Analysis of Max-Min Weighted SINR for IRS-Assisted MISO Systems with Hardware Impairments

Coverage Probability of Distributed IRS Systems Under Spatially Correlated Channels

Towards the Assessment of Realistic Hybrid Precoding in Millimeter Wave MIMO Systems with Hardware Impairments

Towards Optimal Energy Efficiency in Cell-Free Massive MIMO Systems

Intelligent Reflecting Surface-assisted MU-MISO Systems with Imperfect Hardware: Channel Estimation and Beamforming Design

Multipair Two-Way DF Relaying with Cell-Free Massive MIMO

Deep Channel Learning For Large Intelligent Surfaces Aided mm-Wave Massive MIMO Systems

Efficient T-CONT-agnostic Bandwidth and Wavelength Allocation for NG-PON2

Co-existence of OFDM and FBMC for resilient photonic millimeter-wave 5G mobile fronthaul

SDN-enabled MIMO Heterogeneous Cooperative Networks with Flexible Cell Association

Nuts and Bolts of a Realistic Stochastic Geometric Analysis of mmWave HetNets: Hardware Impairments and Channel Aging

Dynamic bandwidth allocation for OFDMA-PONs using Hidden Markov Model

Low Latency, Optical Back-and-Front-hauling for 5G Networks

Dynamic Bandwidth Allocation in Heterogeneous OFDMA-PONs Featuring Intelligent LTE-A Traffic Queuing

Colorless FDMA-PON with flexible bandwidth allocation and colorless, low-speed ONUs [invited]

Dynamic Subcarrier Allocation for 100 Gbps, 40 km OFDMA-PONs with SLA and CoS

An OFDMA-Based Optical Access Network Architecture Exhibiting Ultra-High Capacity and Wireline-Wireless Convergence

Analytical time-domain model for radio over free space optical (RoFSO) systems considering the scintillation effect

Demonstration of wireless backhauling over long-reach PONs

Multi-wavelength WiMAX-PONs with overlapping cells

Full-Service MAC Protocol for Metro-Reach GPONs

Demonstration of Coarse-Fine Grooming in Coarse-WDM-Routed PONs

Interoperability of GPON and WiMAX for network capacity enhancement and resilience


A complete 8-GHz QPSK-MODEM featuring novel subcarrier and data synchronization for optical communications

Multi-PON access network using a coarse AWG for smooth migration from TDM to WDM PON

Invited Workshops
IEEE 5G World Forum 2018 (WF-5G)
Pandelis Kourtessis (Invited speaker)
2018

SPIE Photonics West, OPTO, San Francisco, CA, February 2015
Pandelis Kourtessis (Invited speaker)
2015

Future Networks and Mobile Summit
Pandelis Kourtessis (Invited speaker)
2014

Pandelis Kourtessis (Invited speaker)
2014

Optical-Wireless Integrated Technology for Systems and Networks workshop in collocation with the IEEE International Conference on Communications
Pandelis Kourtessis (Invited speaker)
2013

Joint SARDANA/ACCORDANCE Workshop in the framework of the FTTH Council Europe Conference
Pandelis Kourtessis (Invited speaker)
2011
Next Generation Optical Access Networks Workshop*, Future Network & Mobile Summit
Pandelis Kourtessis (Invited speaker)
2011

Joint FP7 ACCORDANCE/OASE Workshop in collocation with BROADNETs Conference
Pandelis Kourtessis (Invited speaker)
2010

London Communications Symposium (LCS09)
Pandelis Kourtessis (Member of programme committee)
2009

Awarded research projects
OMMU: OMM-Ukraine: Optimised Microgrid Management in Ukraine
Mporas, I., Mohammed, A., Khalil, S. & Kourtessis, P.
1/04/24 → 31/03/26

Research projects completed (funded)

Technical Programme Committees

IEEE 5G World Forum 2018 (WF-5G)
Pandelis Kourtessis (Member of programme committee)
2018 → …

IEEE Global Communications Conference (Globecom)
Pandelis Kourtessis (Invited speaker)
2016 → 2017

2015 IEEE Int Conf on Communications (ICC)
Pandelis Kourtessis (Invited speaker)
2015 → 2017

OSA Photonics Congress
Pandelis Kourtessis (Chair)
2012

OSA Photonics Congress
Pandelis Kourtessis (Chair)
2011

OSA Photonics Congress, Access Networks and In-house Communications (ANIC10)
Pandelis Kourtessis (Member of programme committee)
2010

IEEE/IET International Conference on Access Technologies (ICAT08)
Pandelis Kourtessis (Member of programme committee)
2008

International Conference on Transparent Optical Networks (ICTON)
Pandelis Kourtessis (Invited speaker)
2008 → 2017
Memberships
NetWorld2020 European Technology Platform, 5GPPP expert group (External organisation)
Pandelis Kourtessis (Member)
2015

Optical Society of America (OSA) (External organisation)
Pandelis Kourtessis (Member)
2010 → …

IEEE CS (External organisation)
Pandelis Kourtessis (Member)
2003 → 2017

Institute of Electrical Engineers (External organisation)
Pandelis Kourtessis (Member)
2003 → …

Visiting Professor
Athens Information of Technology (AIT)
Pandelis Kourtessis (Visiting professor)
2010

University College London (UCL)
Pandelis Kourtessis (Visiting professor)
2010

Universidad Politecnica Catalunia
Pandelis Kourtessis (Visiting professor)
2007

Research examinations
Adewale ABE, "High Speed 802.11ad Wireless Video Streaming", Essex University, July 2017
Pandelis Kourtessis (Examiner)
2017

David MUIRHEAD, "Low Complexity Multiple Antenna Techniques for Energy Efficient Indoor Small Cell Base Stations", Surrey University, Apr 2016
Pandelis Kourtessis (Examiner)
2016

Alaa ALSEBAE, "Network Coding and its Application in Computer Networks", Warwick University, Apr 2015
Pandelis Kourtessis (Examiner)
2015

Pandelis Kourtessis (Examiner)
2014

I. Karamitsos, "Quality of Service Methods for Optical Networks", Sunderland University, Oct 2013
Pandelis Kourtessis (Examiner)
K. Banias, "Reinforcement Learning Based Control Mechanism for Elastic resource Scheduling in Cognitive Optical Networks", Essex University, Jul 2013
Pandelis Kourtessis (Examiner)
2013

O. O. Omomukuyo, "Orthogonal frequency Division Multiplexing for Optical Access Networks", UCL, May 2013
Pandelis Kourtessis (Examiner)
2013

Mr Bo Cao, PhD Examination, "Performance analysis and centralised optical processing in next generation access network", 23 February 2012
Pandelis Kourtessis (Examiner)
2012

Marilet De Andrade Jardin, PhD examination, "Resource Optimisation in PONs: DBA Evolution and cost-effective Capacity Upgrades", UPC, Spain, 23 Nov 2010
Pandelis Kourtessis (Examiner)
2010

Media/Releases
Edinburgh Fringe
Pandelis Kourtessis (Invited speaker)
6 Aug 2017 → 28 Aug 2017