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**PROF Ampalavanapillai Nirmalathas**

## Positions

- Academic, Electrical and Electronic Engineering (/individual/org131)

Electrical and Electronic Engineering, Communications, Internet, Broadband Access Networks, Optical networks, Transmission systems (Optical communications, Photonics, Microwave photonics, Terahertz photonics) Entrepreneurship and Innovation

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## Publications

### Selected publications

**2019**

#### Journal Articles Refereed

Deployment and Resource Distribution of Mobile Edge Hosts Based on Correlated User Mobility (/individual/publicationS1361165) 2019

Evolution of Radio-Over-Fiber Technology (/individual/publicationS1354991). *Journal of Lightwave Technology*. 37. 2019

Modeling the Total Energy Consumption of Mobile Network Services and Applications (/individual/publicationS1369379). *Energies*. 12. 2019

**Conference Proceedings**

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2018

### Journal Articles Refereed

5G C-RAN With Optical Fronthaul: An Analysis From a Deployment Perspective  
(/individual/publicationS1286901). *Journal of Lightwave Technology*. 36. 2018

Hierarchical aggregation method for a scalable implementation of demand side management (/individual/publicationS1307042). *Computers & Operations Research*. 96. 2018

High-speed indoor optical wireless communication system employing a silicon integrated photonic circuit (/individual/publicationS1339224). *Optics Letters*. 43. 2018

How Is the Networked Society Impacting Us? (/individual/publicationS1317543). *Proceedings of the IEEE*. 106. 2018

Multi-cell coordination for 60 GHz RoF fronthaul enabled by a non-orthogonal multiple access scheme without successive interference cancellation  
(/individual/publicationS1347412). *Optics Letters*. 43. 2018

Predicting the mean first passage time (MFPT) to reach any state for a passive dynamic walker with steady state variability (/individual/publicationS1359541). *PLoS One*. 13. 2018

Transmission Enhancement in Coaxial Hole Array Based Plasmonic Color Filter for Image Sensor Applications (/individual/publicationS1344528). *IEEE Photonics Journal*. 10. 2018

### Conference Papers Refereed

80 Gb/s Free-Space Reconfigurable Optical Interconnects with Carrierless-Amplitude-Phase Modulation and Space-Time Block Code  
(/individual/publicationS1330980) 2018

A Software-Defined Networking framework for IoT based on 6LoWPAN  
(/individual/publicationS1333752) 2018

Convergence of 5G RAN and Optical Access: A Coordinated Resource Allocation Framework (/individual/publicationS1376533) 2018

Demonstration of Indoor Optical Wireless Communications with Spatial Diversity Using Repetition-Coding and Space-Time-Block Coding  
(/individual/publicationS1401338) 2018

Demonstration of Non-Orthogonal Multiple Access Scheme using Multilevel Coding without Successive Interference Cancellation with 60 GHz Radio-over-Fiber Fronthaul (/individual/publicationS1331997) 2018

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(/individual/publicationS1341869) 2018

Evolution of Radio-Over-Fiber Technologies: Past and Present

(/individual/publicationS1384235) 2018

Experimental Demonstration of a 12.5 Gb/s Indoor Optical Wireless  
Communication System with Silicon Integrated Photonic Circuit

(/individual/publicationS1330977) 2018

High-speed Optical Wireless Communications for Local Area Networks

(/individual/publicationS1401337) 2018

Optical X-haul Options for 5G Fixed Wireless Access: Which One to Choose?

(/individual/publicationS1343996) 2018

Robust and Secure Indoor Optical Wireless Communications Supporting Multiple

Users (/individual/publicationS1330978) 2018

## 2017

### Research Book Chapters

Coordinated Multi-point (CoMP) Systems (/individual/publicationS1283894).  
*FIBER-WIRELESS CONVERGENCE IN NEXT-GENERATION COMMUNICATION  
NETWORKS: SYSTEMS, ARCHITECTURES, AND MANAGEMENT*. Hindawi  
Publishing Corp. 2017

### Journal Articles Refereed

60 GHz Analog Radio-Over-Fiber Fronthaul Investigations  
(/individual/publicationS1233098). *Journal of Lightwave Technology*. 35. 2017

A 60-GHz Radio-Over-Fiber Fronthaul Using Integrated Microwave Photonics  
Filters (/individual/publicationS1235007). *IEEE Photonics Technology Letters*. 29.  
2017

An Energy-Efficient Miniaturized Intracranial Pressure Monitoring System  
(/individual/publicationS1184052). *IEEE Journal of Solid State Circuits*. 52. 2017

Analysis of large flood events: Based on flood data during 1985-2016 in Australia  
and India (/individual/publicationS1214826). *International Journal of Disaster Risk  
Reduction*. 24. 2017

Characterization of geometry and depleting carrier dependence of active silicon  
waveguide in tailoring optical properties (/individual/publicationS1227762) 2017

Dynamic scheduling algorithm for LTE uplink with smart-metering traffic  
(/individual/publicationS1190525). *Transactions on Emerging Telecommunications  
Technologies*. 28. 2017

Hybrid Fiber-Wireless Network: An Optimization Framework for Survivable  
Deployment (/individual/publicationS1222005). *Journal of Optical Communications*

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Space-Time-Coded High-Speed Reconfigurable Card-to-Card Free-Space Optical Interconnects (/individual/publicationS1190305). *Journal of Optical Communications and Networking*. 9. 2017

Time-Slot Coding Scheme With Adaptive Loading Function for Multiple Access in Indoor Optical Wireless Communications (/individual/publicationS1234777). *Journal of Lightwave Technology*. 35. 2017

### Conference Proceedings

Experimental Demonstration of Time-slot Coding Scheme for Multiple Access in High-speed Optical Wireless Communications with Imaging Receiver (/individual/publicationS1334167) 2017

Four-wave-mixing based silicon integrated optical isolator with dynamic non-reciprocity (/individual/publicationS1365981) 2017

Hybrid Coordination Function Controlled Channel Access for Latency-Sensitive Tactile Applications (/individual/publicationS1323653). *IEEE Global Communications Conference*. 2017

IEEE 802.11 HCCA for Tactile Applications (/individual/publicationS1320943) 2017

IEEE 802.11 HCCA for tactile applications (/individual/publicationS1330983) 2017

Silicon integrated optical devices (/individual/publicationS1365983) 2017

Space-Time-Coded Reconfigurable Card-to-Card Optical Interconnects with Broadcast Capability (/individual/publicationS1337596) 2017

### Conference Papers Refereed

5G C-RAN Architecture: A Comparison of Multiple Optical Fronthaul Networks (/individual/publicationS1225722) 2017

A Dual-Infrared-Transmitter Optical Wireless Based Indoor User Localization System with High Accuracy (/individual/publicationS1214791) 2017

Four-Wave-Mixing Based Silicon Integrated Optical Isolator with Dynamic Non-Reciprocity (/individual/publicationS1290194) 2017

Integration of Optical-Wireless Networks for Broadband Mobile Networks (/individual/publicationS1288457) 2017

Performance Evaluation of CoMP for Downlink 60-GHz Radio-over-Fiber Fronthaul (/individual/publicationS1311929) 2017

Radio-over-fiber technology: Past and present (/individual/publicationS1306252) 2017

Silicon Integrated Optical Devices (/individual/publicationS1290195) 2017

Transport Schemes for Fiber-Based Fronthaul for Transporting 60 GHz Wireless Signals (/individual/publicationS1269505) 2017

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All-Graphene Planar Double-Quantum-Dot Resonant Tunneling Diodes  
(/individual/publicationS1056363) 2016

Four-Wave-Mixing-Based Silicon Integrated Optical Isolator With Dynamic Non-Reciprocity (/individual/publicationS1080499). *IEEE Photonics Technology Letters*. 28. 2016

Full-Duplex Gigabit Indoor Optical Wireless Communication System With CAP Modulation (/individual/publicationS1053168). *IEEE Photonics Technology Letters*. 28. 2016

MFPT calculation for random walks in inhomogeneous networks  
(/individual/publicationS1085305). *Physica A - Statistical Mechanics and its Applications*. 462. 2016

Monolayer MoS<sub>2</sub> self-switching diodes (/individual/publicationS1031044). *Journal of Applied Physics*. 119. 2016

Network Energy Consumption Assessment of Conventional Mobile Services and Over-the-Top Instant Messaging Applications (/individual/publicationS1125137). *IEEE Journal on Selected Areas in Communications*. 34. 2016

Optical Wireless-Based Indoor Localization System Employing a Single-Channel Imaging Receiver (/individual/publicationS1052933). *Journal of Lightwave Technology*. 34. 2016

Performance Enhanced Butt Coupling for Effective Interconnection Between Fiber and Silicon Nanowire (/individual/publicationS1093015). *IEEE Journal of Quantum Electronics*. 52. 2016

Performance of Planar, Rib, and Photonic Crystal Silicon Waveguides in Tailoring Group-Velocity Dispersion and Mode Loss (/individual/publicationS1018269). *IEEE Journal of Selected Topics in Quantum Electronics*. 22. 2016

Radio-Over-Fiber Technologies for Emerging Wireless Systems  
(/individual/publicationS1030333). *IEEE Journal of Quantum Electronics*. 52. 2016

Review of physical layer networking for optical-wireless integration  
(/individual/publicationS1029225). *Optical Engineering*. 55. 2016

Telecommunications energy and greenhouse gas emissions management for future network growth (/individual/publicationS1030009). *Applied Energy*. 166. 2016

Time-slot coding scheme for multiple access in indoor optical wireless communications (/individual/publicationS1118214). *Optics Letters*. 41. 2016

Tuneable graphene nanopores for single biomolecule detection  
(/individual/publicationS1058941). *Nanoscale*. 8. 2016

### Conference Papers Refereed

Bi-Directional Space-Time Coded Reconfigurable Board-to-Board Free-Space

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High-Speed Optical Wireless Personal Area Communication System Supporting Multiple Users (/individual/publicationS1192798) 2016

Managing the Use-phase and Embodied Energy Consumption to Achieve Sustainable Network Growth (/individual/publicationS1200728) 2016

Optical Wireless Communications for High-Speed In-Building Personal Area Networks (/individual/publicationS1097758) 2016

Optimal Design and Backhauling of Small-Cell Network: Implication of Energy Cost (/individual/publicationS1097746) 2016

Recent Progresses in Gigabit Wireless Access Using Millimetre-wave RoFs (Invited) (/individual/publicationS1093013) 2016

Short-Range Infrared Optical Wireless Communications - Systems and Integration (/individual/publicationS1101633) 2016

Space-Time Coded High-Speed Reconfigurable Free-Space Card-to-Card Optical Interconnects with Extended Range (/individual/publicationS1101635) 2016

## 2015

### Journal Articles Refereed

Cost Optimal Placement and Backhauling of Small-Cell Networks (/individual/publicationS987576) 2015

Experimental demonstration of a novel indoor optical wireless localization system for high-speed personal area networks (/individual/publicationS975806). *Optics Letters*. 40. 2015

Highly Effective Conductance Modulation in Planar Silicene Field Effect Devices Due to Buckling (/individual/publicationS1012456). *Scientific Reports*. 5. 2015

### Other Refereed Contribution to Refereed Journals

Microwave Photonics-Double Magic (/individual/publicationS995163). *IEEE Microwave Magazine*. 16. 2015

Special issue on energy-efficient optical networks (/individual/publicationS987850) 2015

### Conference Papers Refereed

2×2 silicon integrated optical phased array for beam steering applications (/individual/publicationS1029205) 2015

Co-simulation Platform for Smart Grid Applications (/individual/publicationS1028597) 2015

Controlling group delay in single and multi-stage slotted ring resonator with

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Experimental demonstration of optical wireless indoor localization system with background light power estimation (/individual/publicationS983948) 2015

Experimental demonstration of space-time-coded robust high-speed indoor optical wireless communication system (/individual/publicationS1029192) 2015

Fiber-Wireless Technology for Small Cell Backhauling (/individual/publicationS1008542) 2015

Full-Duplex Reconfigurable Card-to-Card Optical Interconnects based on Hybrid Free-Space and Multi-Mode Fiber Propagation (/individual/publicationS986295) 2015

High-Speed Optical Wireless Communications in Personal Areas (Invited) (/individual/publicationS944483) 2015

High-speed optical wireless communications in personal areas (Invited) (/individual/publicationS1029189) 2015

Optimization Framework for Deployment of Hybrid Fiber Wireless Networks with Survivability Constraints (/individual/publicationS1028595) 2015

Optimization and Deployment of Survivable Fiber-Wireless (FiWi) Access Networks with Integrated Small Cell and WiFi (/individual/publicationS1028596) 2015

Photonics for gigabit wireless networks (/individual/publicationS983118) 2015

Recirculating Frequency Shifter-Based Hybrid Electro-Optic Probing System with Ultra-Wide Bandwidth (/individual/publicationS994690) 2015

## 2014

### Journal Articles Refereed

All-Graphene Planar Double Barrier Resonant Tunneling Diodes (/individual/publicationS982081) 2014

All-Graphene Planar Self-Switching MISFEDs, Metal-Insulator-Semiconductor Field-Effect Diodes (/individual/publication247367). *Scientific Reports*. 4. 2014

An Efficient Resource Allocation Mechanism for LTE-GEAPON Converged Networks (/individual/publication202507). *Journal of Network and Systems Management*. 22. 2014

Asymmetrically-gated graphene self-switching diodes as negative differential resistance devices (/individual/publication255607). *Nanoscale*. 6. 2014

Experimental demonstration of free-space based 120 Gb/s reconfigurable card-to-card optical interconnects (/individual/publicationS916405). *Optics Letters*. 39. 2014

Improving Scalability of VoD Systems by Optimal Exploitation of Storage and Multicast (/individual/publication252069). *IEEE Transactions on Circuits and Systems for Video Technology*. 24. 2014

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120 Gb/s reconfigurable optical interconnect based on hybrid free-space and MMF propagations (/individual/publicationS916409) 2014

A flexible, wide bandwidth electro-optic probing system using a recirculating frequency shifter (/individual/publicationS974419) 2014

Analysis of IP-Based Communication Backbone over Shared Wide Area-Network for Smart Grid Applications (/individual/publicationS1008543) 2014

Digitized RF over fiber systems (/individual/publicationS916248). *Optics InfoBase Conference Papers*. 2014

Dispersion and loss analysis in circular and bragg core passive silicon waveguides (/individual/publicationS935963) 2014

Free-Space 120 Gb/s Reconfigurable Card-to-Card Optical Wireless Interconnects with 16-CAP Modulation (/individual/publicationS916410) 2014

Graphene Field Effect Nanopore Glycine Detector (/individual/publicationS936968) 2014

Investigation on the Performance of a 20 GHz Electro-Optic Probing Scheme Using Balanced Heterodyne Detection (/individual/publication258003) 2014

OFDM with Digitized Transport for High Capacity Fiber-Wireless Links (/individual/publicationS975112) 2014

Photonics enabled wireless networks: Optical wireless and optical backhaul (/individual/publicationS1037745) 2014

Si integrated optical phased array for efficient beam steering in optical wireless communications (/individual/publicationS971106) 2014

Small-Cell Network Site Planning: A Framework Based on Terrain Effects and Urban Geography Characteristics (/individual/publication258008) 2014

Towards a Framework for Small-cell Network Planning (/individual/publication258899). *Progress in Electromagnetics Research Symposium*. 2014

Transport Strategies for Broadband Wireless Signals Distribution in Fiber-Wireless Links (/individual/publication258004) 2014

Wireless Backhaul Challenge: Optical-wireless Network Integration as a Solution (/individual/publicationS1037743) 2014

Wireless Signals Transport in Fiber-Wireless Links: Digitized versus Analog (/individual/publicationS936030) 2014

## 2013

### Research Book Chapters

A centralized real-time E-healthcare system for remote detection and prediction of

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A Geographic Primitive-Based Bayesian Framework to Predict Cyclone-Induced Flooding (/individual/publication196595). *Journal of Hydrometeorology*. 14. 2013

Architecture Discovery Enabled Resource Allocation Mechanism for Next Generation Optical-Wireless Converged Networks (/individual/publication202505). *Journal of Optical Communications and Networking*. 5. 2013

Digitized RF-over-fiber as a cost-effective and energy-efficient backhaul option for wireless communications (/individual/publication190940). *Annales des Telecommunications*. 68. 2013

High-Speed Full-Duplex Optical Wireless Communication System with Single Channel Imaging Receiver for Personal Area Networks (/individual/publication192078). *IEICE Transactions on Electronics*. E96C. 2013

High-speed free-space based reconfigurable card-to-card optical interconnects with broadcast capability (/individual/publication201995). *Optics Express*. 21. 2013

High-speed reconfigurable card-to-card optical interconnects based on hybrid free-space and multi-mode fiber propagations (/individual/publication209828). *Optics Express*. 21. 2013

Methodologies for Assessing the Use-Phase Power Consumption and Greenhouse Gas Emissions of Telecommunications Network Services (/individual/publication186323). *Environmental Science & Technology*. 47. 2013

Performance of High-Speed Reconfigurable Free-Space Card-to-Card Optical Interconnects Under Air Turbulence (/individual/publication198157). *Journal of Lightwave Technology*. 31. 2013

### Conference Papers Refereed

Balanced heterodyne architecture for improving the noise performance of electro-optic probing systems (/individual/publication245696) 2013

Converged fiber-wireless access networks for next generation mobile backhaul enabling CoMP (/individual/publication209014) 2013

Energy audit models for telecommunications networks and services (/individual/publicationS745493) 2013

Experimental Demonstration of High-Speed Reconfigurable Card-to-Card Optical Interconnects with Broadcast Capability (/individual/publication205872) 2013

Experimental Demonstration of Reconfigurable Optical Interconnect based on Hybrid Free-Space and Multi-Mode Fiber Propagation (/individual/publication202263) 2013

Experimental demonstration of a centralized optical wireless indoor localization system for high-speed communications in personal areas (/individual/publication206341) 2013

Experimental demonstration of high-speed free-space reconfigurable card-to-card optical interconnects (/individual/publication195239) *Optics Express* 2013

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Implications of Sleep Mode Operation on QoS Performance in Optical-Wireless Converged Networks (/individual/publicationS1028591) 2013

Quasi-Phase Matching with Tapered Waveguides for Terahertz Generation (/individual/publication206331) 2013

Radio-over-Fiber Technologies for Future Mobile Backhaul Supporting Cooperative Base Stations (/individual/publicationS688723). *IEEE - MTTS International Microwave Symposium. Digest.* 2013

### Conference Papers Unrefereed

OPTICAL GENERATION OF MICROWAVE CARRIER USING OPTICALLY INJECTION-LOCKED FABRY-PEROT LASER DIODES IN TANDEM (/individual/publication208104) 2013

## 2012

### Research Book Chapters

A Centralized Real-Time E-Healthcare System for Remote Detection and Prediction of Epileptic Seizures (/individual/publication167379). *E-HEALTHCARE SYSTEMS AND WIRELESS COMMUNICATIONS: CURRENT AND FUTURE CHALLENGES.* 2012

### Journal Articles Refereed

Differential group delay monitoring for high-speed data based on a low-frequency radio-frequency tone power measurement (/individual/publication178631). *IET Optoelectronics.* 6. 2012

Experimental Demonstration of High-Speed Full-Duplex Reconfigurable Free-Space Card-to-Card Optical Interconnects (/individual/publication195389) 2012

Experimental Demonstration of a Full-Duplex Indoor Optical Wireless Communication System (/individual/publication176509). *IEEE Photonics Technology Letters.* 24. 2012

Experimental demonstration of 3 x 3 10 Gb/s reconfigurable free space optical card-to-card interconnects (/individual/publication180990). *Optics Letters.* 37. 2012

High-Speed Reconfigurable Free-Space Card-to-Card Optical Interconnects (/individual/publication181992). *IEEE Photonics Journal.* 4. 2012

High-speed indoor optical wireless communication system with single channel imaging receiver (/individual/publication178630). *Optics Express.* 20. 2012

Impact of Crosstalk on Indoor WDM Optical Wireless Communication Systems (/individual/publication177675). *IEEE Photonics Journal.* 4. 2012

Multilevel Intensity Modulations for Simplified Full-Duplex Millimeter-Wave Radio-Over-Fiber Communication Systems (/individual/publication180720). *IEEE*

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Next Generation Optical-wireless Converged Network Architectures  
(/individual/publication185643). *IEEE Network: the magazine of global internetworking*. 26. 2012

OFDM Versus Single Carrier Towards Spectrally Efficient 100 Gb/s Transmission With Direct Detection (/individual/publication182830). *Journal of Optical Communications and Networking*. 4. 2012

Simplification of millimeter-wave radio-over-fiber system employing heterodyning of uncorrelated optical carriers and self-homodyning of RF signal at the receiver  
(/individual/publication178658). *Optics Express*. 20. 2012

Simplified Generation, Transport, and Data Recovery of Millimeter-Wave Signal in a Full-Duplex Bidirectional Fiber-Wireless System (/individual/publication181730). *IEEE Photonics Technology Letters*. 24. 2012

Ultra-broadband indoor optical wireless communication system with multimode fiber  
(/individual/publication178937). *Optics Letters*. 37. 2012

### Journal Articles Unrefereed

Towards an energy rating system for telecommunications  
(/individual/publication187124). *Telecommunications Journal of Australia*. 62. 2012

### Journal Articles Unrefereed Letters or Notes

High-speed indoor optical wireless communication system with single channel imaging receiver (vol 20, pg 8442, 2012) (/individual/publicationS421897). *Optics Express*. 20. 2012

### Conference Papers Refereed

A Computationally Efficient Framework for Stochastic Prediction of Flood Propagation (/individual/publication183203) 2012

A Full-Duplex Digitized RoF System for Millimeter-Wave OFDM Transmission  
(/individual/publication204190) 2012

An analysis of electro-optic measurement of electric Fields using Jones matrix formulation (/individual/publicationS576953) 2012

Bandwidth Improvement of Digitized RoF System Using Track-and-Hold Amplifier  
(/individual/publication196213) 2012

Digitized RF-over-Fiber for Efficient Fiber-Wireless Signal Transport  
(/individual/publication196512) 2012

Digitized RF-over-fiber technique as an efficient solution for wideband wireless OFDM delivery (/individual/publication178900). *Optics InfoBase Conference Papers*. 2012

Energy Consumption of Next-Generation Optical-Wireless Converged Networks  
(/individual/publication185546) 2012

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High Performance Fiber-Radio Link: Digitized Radio-over-Fiber  
(/individual/publication195231) 2012

High-Speed Indoor Optical Wireless Communication System with a Steering Mirror  
Based Up-Link Receiver (/individual/publication204185) 2012

High-Speed Optical Wireless Communication System with Steering-Mirror Based  
Receiver for Personal Area Applications (/individual/publication195403) 2012

Impact of polarization state on high-speed indoor optical wireless communication  
system (/individual/publicationS647716) 2012

In-House Seamless and Transparent Internet on the Move through Cordless  
Access to FTTH (/individual/publication196215) 2012

Indoor Optical Wireless Localization System with Height Estimation for High-Speed  
Wireless Communications in Personal Areas (/individual/publication196209) 2012

Indoor WDM optical wireless communication system with single channel imaging  
receiver (/individual/publication182512) 2012

Indoor optical wireless localization system for high-speed personal area networks  
(/individual/publication192841) 2012

Millimeter-wave signal transmission using digitized radio-over-fiber technique  
(/individual/publication181718). *IEEE - MTTS International Microwave Symposium.  
Digest.* 2012

Multi-level ASK Demonstrations in Millimeter-wave Radio-over-fiber System using  
Free-running Lasers and RF Self-homodyning (/individual/publication196211) 2012

Performance of Reconfigurable Free-Space Card-to-Card Optical Interconnects  
under Atmospheric Turbulence (/individual/publication196510) 2012

QoS Performance of Next Generation Optical-Wireless Converged Network and  
PON Cycle Length (/individual/publication196214) 2012

Seamless handover scheme in energy-efficient long reach WDM/TDM PON  
systems (/individual/publication182513) 2012

Ultra-Broadband Optical Wireless Communication System with Single Channel  
Imaging Receiver and Multi-Mode Fiber for Personal Area Networks  
(/individual/publication196216) 2012

## 2011

### Journal Articles Refereed

4 x 12.5 Gb/s WDM Optical Wireless Communication System for Indoor  
Applications (/individual/publication161670). *Journal of Lightwave Technology.* 29.  
2011

A Ka-BAND LOW-NOISE AMPLIFIER USING SEMICIRCLE STACKED-GCPW

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Digitized RF-Over-Fiber Technique (/individual/publication163915). *Journal of Lightwave Technology*. 29. 2011

Impact of background light induced shot noise in high-speed full-duplex indoor optical wireless communication systems (/individual/publication170966). *Optics Express*. 19. 2011

Improving Energy Efficiency of Video on Demand Services (/individual/publication172382). *Journal of Optical Communications and Networking*. 3. 2011

Local-Traffic-Redirection-Based Dynamic Bandwidth Assignment Scheme for EPON With Active Forwarding Remote Repeater Node (/individual/publication160311). *Journal of Optical Communications and Networking*. 3. 2011

Millimeter-Wave Radio-Over-Fiber System Based on Heterodyned Unlocked Light Sources and Self-Homodyned RF Receiver (/individual/publication161638). *IEEE Photonics Technology Letters*. 23. 2011

Scalable and Spectrally Efficient Long-Reach Optical Access Networks Employing Frequency Interleaved Directly Detected Optical OFDM (/individual/publication172402). *Journal of Optical Communications and Networking*. 3. 2011

Single-Channel Directly Detected Optical-OFDM Towards Higher Spectral Efficiency and Simplicity in 100 Gb/s Ethernet and Beyond (/individual/publication161622). *Journal of Optical Communications and Networking*. 3. 2011

#### Journal Articles Unrefereed

High-Speed Optical Wireless Communication System for Indoor Applications (/individual/publication159665). *IEEE Photonics Technology Letters*. 23. 2011

#### Conference Papers Refereed

100 Gb/s 1024-way-split 100-km long-reach PON using spectrally efficient frequency interleaved directly detected optical OFDM (/individual/publicationS460398). *Optics InfoBase Conference Papers*. 2011

12.5 Gbps indoor optical wireless communication system with single channel imaging receiver (/individual/publication251191) 2011

An analysis of electro-optic measurement of electric Fields using Jones matrix formulation (/individual/publication177027). *SPIE - International Society for Optical Engineering. Proceedings*. 2011

Background light induced noise and its effects on indoor gigabit optical wireless communication systems (/individual/publicationS690658). *Optics InfoBase Conference Papers*. 2011

Comparison of Energy Consumption of Integrated Optical-Wireless Access Networks (/individual/publication160311). 2011

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Digitized wireless transport for Fiber-wireless Systems  
(/individual/publication170466) 2011

Energy Efficient Content Distribution for VoD Services  
(/individual/publication162588) 2011

Energy Efficient Delivery Methods for Video-rich Services over Next Generation  
Broadband Access Networks (/individual/publication162618). *IEEE International  
Conference on Communications.* 2011

Experimental demonstration of a novel indoor optical wireless localization system  
for tracking multiple users (/individual/publication251444). *Optics InfoBase  
Conference Papers.* 2011

Flexible, low-latency peer-to-peer networking over long-reach WDM/TDM PON  
systems (/individual/publication162387) 2011

High Speed 4x12.5Gbps WDM Optical Wireless Communication Systems for  
Indoor Applications (/individual/publication162593) 2011

High-Speed Full-Duplex Optical Wireless Communication Systems for Indoor  
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Self-seeded reflective semiconductor optical amplifier for upstream access and  
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millimeter-wave fiber-radio systems (/individual/publication82687) 2006

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Carrier-density evolution in polarization sensitive semiconductor optical amplifiers  
(/individual/publication64760) 2006

Tunable wavelength conversion using PPLN at data rates up to 160 Gb/s  
(/individual/publication63529) 2006

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Novel chirped fiber grating based SOA ring laser for the generation of switching-wavelength pulses (/individual/publication39511) 2005

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Simplified multiplexing scheme for wavelength-interleaved DWDM millimeter-wave fiber-radio systems (/individual/publication44254) 2005

Tunable wavelength conversion of 40Gb/s RZ signals using cascaded SFG-DFG within PPLN waveguides (/individual/publication82962) 2005

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An optimized performance of subcarrier multiplexing within analogue optical link  
(/individual/publication82901) 2004

Experimental verification of cascadability of WDM optical interfaces for DWDM  
millimeter-wave fiber-radio base station (/individual/publication28975) 2004

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DWDM systems using CSRZ-DPSK format (/individual/publication32014) 2004

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Fibre-radio - Challenges and possible solutions (/individual/publication82732) 2003

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Line rate optical clock recovery by injection locking a long cavity Fabry-Perot semiconductor laser (/individual/publication18378) 2003

Multi-channel dual-mode pulse generation for DWDM and fiber-wireless system application (/individual/publication22735) 2003

Novel technique for soft failure monitoring in optical links

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Fast rate optical signal recovery by injection locking a short cavity ring resonator  
Laser Diode and Opto-Electronic Feedback (/individual/publication82940) 2002

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OADM with a multiple phase-shifted FBG for a wavelength-interleaved millimeter-wave fiber-radio system (/individual/publication10625) 2002

Simultaneous reduction of amplitude modulation at multiple frequencies in pulse trains from subharmonic synchronous mode-locked laser (/individual/publication10878) 2002

Spectral optimisation of multi phase-shifted fibre Bragg grating with triple bandpass peaks (/individual/publication10367) 2002

The merging of a wavelength interleaved WDM fiber-radio backbone with a standard WDM ring network (/individual/publication10234) 2002

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High capacity optical fibre backbone networks for millimetre-wave fibre-radio systems (/individual/publication82891) 2002

2001

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Photonic technologies enabling future optical networks

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Millimetre-wave fibre-radio system incorporating broadband radio CDMA (/individual/publicationS1059366) 1998

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Subharmonic synchronous mode-locking of a monolithic DBR semiconductor laser (/individual/publicationS1059370) 1996



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