

# IEEE Communications Society

## Past Distinguished Lecturers

Last updated 1/2/2020

Speaker Name	DL Topics	DL Term
Behnaam Aazhang	<ul style="list-style-type: none"><li>• Multiuser communication</li><li>• Multiple access communication</li><li>• Spectrum Sharing in wireless communication</li><li>• Cooperative Communication</li><li>• Scheduling in Wireless Communication</li><li>• Feedback in Wireless Communication</li></ul>	Term effective through 31 December 2007
Hamid Aghvami	<ul style="list-style-type: none"><li>• Delivering Ubiquitous Services Over Heterogeneous Networks (In the Context of End-to-End Networking)</li><li>• Future Broadband Access Networks-Challenges</li></ul>	Term effective through 31 December 2006
Nazim Agoulmine	<ul style="list-style-type: none"><li>• Communication and Bio-Sensors Technologies Integration for Cost-Effective Ubiquitous Healthcare</li><li>• Energy Efficiency in Mobile Healthcare Systems</li><li>• Autonomic Fixed and Wireless Networks: Concepts and Implementations</li></ul>	Term effective through 31 December 2014
Rui Luis Aguiar	<ul style="list-style-type: none"><li>• An overview of 5G network research</li><li>• 10 years of Future Internet research: where do we stand?</li><li>• Reconsidering management challenges in chaotic telecommunication environments</li><li>• Questioning Quality of Service in telecommunications today</li></ul>	Term effective through 31 December 2018
Salah Aidarous	<ul style="list-style-type: none"><li>• New Technologies (3G, IP, WDM) Impact on Network Operations</li><li>• Evolution to NGOSS and Transition Strategies</li></ul>	Term effective through 31 December 2002
Sonia Aissa	<ul style="list-style-type: none"><li>• Cognitive Radio and Dynamic Spectrum Access</li><li>• Energy Harvesting Communication Networks</li><li>• Wireless Power Transfer</li></ul>	Term effective through 31 December 2016

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Ozgur Akan	<ul style="list-style-type: none"> <li>● Fundamentals of Nanoscale Communications</li> <li>● Bio-inspired Communication and Networking</li> <li>● Introduction to Molecular Communications and Nanonetworks</li> <li>● Carbon-nanotube (CNT)-based Nanoscale Ad Hoc and Sensor Networks</li> <li>● Cognitive Radio Sensor Networks</li> <li>● Next-generation Wireless Sensor Networks</li> <li>● Multimedia Communications: Now and Future</li> <li>● Deep Space Communications and InterPlaNetary Internet</li> </ul>	Term effective through 31 December 2012
Ian Akyildiz	<ul style="list-style-type: none"> <li>● Cognitive Radio Networks</li> <li>● Cognitive Ad Hoc Networks</li> <li>● Wireless Multimedia Sensor Networks</li> <li>● Sensor networks in Challenging Environments such as Underwater and Underground</li> <li>● Wireless Mesh Networks</li> <li>● Nano-Networks: A New Communication Paradigm</li> <li>● Wireless Networking in the Next Decade</li> </ul>	Term effective through 31 December 2009
Mohamed-Slim Alouini	<ul style="list-style-type: none"> <li>● Addressing spectrum scarcity through optical wireless communications</li> <li>● Pushing the envelope of wireless sensor networks</li> </ul>	Term effective through 31 December 2017
Khaled Amer	<ul style="list-style-type: none"> <li>● Architecture Analysis and performance modeling of network systems and protocols</li> </ul>	Term effective through 31 December 2006
Koichi Asatani	<ul style="list-style-type: none"> <li>● NGN (Next Generation Networks) and FN (Future Networks)</li> <li>● VoIP, IP Telephony</li> <li>● Communications QoS &amp; Reliability</li> <li>● Access Networks</li> <li>● Wireless LAN and Broadband Internet</li> <li>● Regulatory Issues of NGN and Internet</li> </ul>	Term effective through 31 December 2014

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Victor Bahl	<ul style="list-style-type: none"> <li>● Wireless Mesh Networks</li> <li>● Wireless Network Management</li> <li>● Enterprise Network Management</li> <li>● Cognitive Wireless Networking &amp; Spectrum Management</li> </ul>	Term effective through 31 December 2008
Albert Banchs	<ul style="list-style-type: none"> <li>● Offloading Cellular Traffic through Opportunistic Communications</li> <li>● Performance Analysis and Optimization of wireless networks</li> <li>● An Overview of 5G mobile networks</li> <li>● Applying control and game theory to wireless networking</li> </ul>	Term effective through 31 December 2017
Zeke Bar-Ness	<ul style="list-style-type: none"> <li>● Peak to average reduction in OFDM-MIMO</li> <li>● Adaptive modulation coding and power allocation for OFDM-MIMO</li> <li>● Effect of phase noise on OFDM and OFDM-MIMO schemes</li> <li>● MIMO Hybrid ARQ for highly frequency selective and time varying channel</li> <li>● Modulation Classification for Emerging Communication Technologies</li> </ul>	Term effective through 31 December 2007
Norman C. Beaulieu	<ul style="list-style-type: none"> <li>● Ultra-Wide Bandwidth (UWB) Receiver Performance Analysis</li> <li>● UWB Receiver Structures for Multiple User Interference</li> <li>● Diversity and Fading Channels</li> <li>● Interference in Wireless Systems</li> <li>● Pulse-Shaping</li> <li>● Wireless Communication Theory</li> <li>● Fading Channel Modeling and Simulation</li> <li>● Importance Sampling and Rejection Sampling Techniques</li> </ul>	Term effective through 31 December 2015
Ali Begen	<ul style="list-style-type: none"> <li>● Multimedia Communications</li> <li>● Networked Entertainment</li> <li>● IPTV Technologies and Content Delivery</li> <li>● Over-the-Top Video and Streaming</li> </ul>	Term effective through 31 December 2019

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Jalel Ben-Othman	<ul style="list-style-type: none"> <li>● Wireless Communication and Mobile Networking</li> <li>● Sensor Networks</li> <li>● VANETS</li> <li>● Wireless, Mobile Ad hoc and Mesh Networks</li> <li>● QoS in Heterogeneous Wired and Wireless Networks</li> <li>● Security: Ad hoc, Sensor and ubiquitous Networks</li> <li>● Performance Evaluation: Markovian Process, SAN, Queuing Networks</li> <li>● Cloud Computing</li> </ul>	Term effective through 31 December 2018
Randall Berry	<ul style="list-style-type: none"> <li>● Spectrum Sharing Economics</li> <li>● Interference Games</li> <li>● Market design and dynamic spectrum sharing</li> </ul>	Term effective through 31 December 2015
Vijay K. Bhargava	<ul style="list-style-type: none"> <li>● Green Cellular Networks: A Survey, Some Research Issues and Challenges</li> <li>● Multigigabit Wireless Multimedia Communications: Future and Core Technologies</li> <li>● Information Security and its Impact on Society</li> <li>● From Marconi to Wireless Internet: A Communications Perspective</li> </ul>	Term effective through 31 December 2010
Ezio Biglieri	<ul style="list-style-type: none"> <li>● Coding for Fading Channels</li> <li>● Multiple Transmit and Receive Antennas: Capacity Limits, Space-Time Codes, and Signal Processing</li> <li>● Turbo Algorithms for Decoding, Equalization, and Detection: A Graphical Approach</li> </ul>	Term effective through 31 December 2006
Benny Bing	<ul style="list-style-type: none"> <li>● Emerging Technologies of Wireless LANs: Theory, Design, and Deployment</li> <li>● Next Generation Broadband Wireless Access</li> <li>● Broadband Cable and Fiber Access</li> <li>● Software Defined Radio and Cognitive Radio Networks</li> <li>● Multiple Access Communications</li> </ul>	Term effective through 31 December 2008

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Azzedine Boukerche		Term effective through 31 December 2012
Raouf Boutaba	<ul style="list-style-type: none"> <li>• Autonomic Computing and Communications</li> </ul>	Term effective through 31 December 2009
Stefano Bregni	<ul style="list-style-type: none"> <li>• Synchronization of Digital Telecommunications Networks</li> </ul>	Term effective through 31 December 2008
Stephen Bush	<ul style="list-style-type: none"> <li>• Nanoscale Communication Networks</li> <li>• Smart Grid: Communication-Enabled Intelligence for the Electric Power Grid</li> </ul>	Term effective through 31 December 2012
Danijela Cabric	<ul style="list-style-type: none"> <li>• Physical Layer MIMO Millimeter-wave Communications</li> <li>• Ultra-Dense Millimeter-wave Cellular Networks: Beam Discovery, Association, and Handover</li> <li>• Machine Learning for Cognitive Radios</li> <li>• Advances in Spectrum Sensing and Signal Classification</li> <li>• Massive MIMO and Interference Management in Spectrum Sharing networks</li> <li>• Energy-efficient Massive IoT Communications over Shared Spectrum</li> </ul>	Term effective through 31 December 2019
Anthony Chan	<ul style="list-style-type: none"> <li>• 5G and Future Wireless Internet: Changes and Challenges</li> <li>• Software Defined Network and Network Function Virtualization for Wireless Networks</li> <li>• Distributed Mobility for Future Mobile Internet</li> <li>• Role of Communication and Networking in Developing Countries and Digital Divide</li> </ul>	Term effective through 31 December 2016
Rajarathnam Chandramouli	<ul style="list-style-type: none"> <li>• Dynamic Spectrum Access Wireless Networking</li> <li>• Big Data Problems in Social Network Modeling and Analytics</li> </ul>	Term effective through 31 December 2014

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Wai Chen	<ul style="list-style-type: none"><li>• Advances in Vehicle Information Networking</li></ul>	Term effective through 31 December 2006
Shigang Chen	<ul style="list-style-type: none"><li>• Virtual Sketches and Space Sharing: A Tool Box for Big Data</li><li>• Compact and Fast Network Measurement Methods</li><li>• Infrastructural RFID Systems and Their Impact on Internet of Things</li></ul>	Term effective through 31 December 2017
Tee Hiang Cheng	<ul style="list-style-type: none"><li>• All-Optical Photonic Packet Switching: What Have Changed and What Have Not Changed After 20 Years?</li><li>• Optical Access Networks: Past, Present and Future</li><li>• Doppler Effect and Its Engineering Applications</li></ul>	Term effective through 31 December 2012
Yu Cheng	<ul style="list-style-type: none"><li>• Optimizing wireless networks in a uniformed multi-dimensional resource framework</li><li>• Real-time intrusion detection for multimedia application over wireless networks</li><li>• Towards a secure and efficient vehicular ad hoc network</li></ul>	Term effective through 31 December 2017
Giovanni Cherubini	<ul style="list-style-type: none"><li>• Data transmission techniques for storage applications</li><li>• Filter-bank modulation techniques for transmission over frequency-selective channels</li></ul>	Term effective through 31 December 2007
Nim Cheung	<ul style="list-style-type: none"><li>• Technology and Architecture Trends in Optical Networking</li><li>• The Role of Optical Interconnect in Supercomputing</li></ul>	Term effective through 31 December 2008
Mung Chiang	<ul style="list-style-type: none"><li>• Teaching Networking via 20 Questions</li></ul>	Term effective through 31 December 2013

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Marco Chiani	<ul style="list-style-type: none"><li>● Fundamentals and Advances in MIMO Communication Systems and Networks</li><li>● Application of random matrices theory to communications and signal processing</li><li>● Spectrum Sensing for Cognitive Radio: fundamental limits and multiple antenna based methods</li><li>● Codes on Graphs for Throughput Enhancement, Packet Loss Correction and Multiple Access</li></ul>	Term effective through 31 December 2012
George Chrisikos		Term effective through 31 December 2015
J.R. Cruz	<ul style="list-style-type: none"><li>● The Role of Communications Signal Processing in Storage</li><li>● Systems Signal Processing and Coding for Perpendicular Magnetic Recording</li><li>● Advanced Channel Detection and Iterative Decoding for Hard Disk Drives</li></ul>	Term effective through 31 December 2010
Shuguang Cui	<ul style="list-style-type: none"><li>● An integrated approach to big data analytics and networking</li><li>● Renewable energy powered communication system design</li><li>● Big data aware next-generation cellular design</li></ul>	Term effective through 31 December 2016
Davide Dardari	<ul style="list-style-type: none"><li>● Indoor localization and tracking: from theoretical foundations to practical applications</li><li>● Backscatter-based communication and localization: the future of battery-less radio identification and positioning in IoT networks</li><li>● Massive antenna arrays at mmWave: opportunities in localization and mapping</li><li>● Joint localization and navigation in UAV networks</li><li>● Crowd-based estimation in wireless sensor networks</li></ul>	Term effective through 31 December 2019
Luiz DaSilva	<ul style="list-style-type: none"><li>● Game theory and wireless networks</li><li>● Cognitive networks</li><li>● Recent advances in dynamic spectrum access</li></ul>	Term effective through 31 December 2018

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	<ul style="list-style-type: none"> <li>• Network sharing and the virtualisation of the wireless access</li> </ul>	
Uday B. Desai	<ul style="list-style-type: none"> <li>• Wireless Sensor Networks: AgriSens and SenSlide</li> <li>• Self Organizing Networks: Multihop Routing and Access Mechanism</li> <li>• Multi- hop Cellular Networks</li> <li>• ICT for Socioeconomic Development</li> <li>• Cell Phone Based Wireless Sensor Networks: Layered Routing</li> </ul>	Term effective through 31 December 2009
Celia Desmond	<ul style="list-style-type: none"> <li>• Trends in the Telecommunications Industry</li> <li>• Project Management for Telecommunications Managers</li> <li>• Coaching for Managers</li> <li>• Communications Course – Making Yourself Heard</li> </ul>	Term effective through 31 December 2008
Michael Devetsikiotis	<ul style="list-style-type: none"> <li>• Challenges in Service Oriented and Application Aware Networking</li> <li>• Modeling and Simulation Techniques for Communication Networks</li> <li>• Towards Network Enabled Collaboration and Innovation</li> <li>• Formal Methods for Cross Layer Quantitative Modeling of Networks</li> <li>• Adaptivity Mechanisms in Next Generation Networks</li> <li>• Pricing and Optimization of Service Oriented Next Generation Networks</li> <li>• Traffic Characterization and Analysis for Next Generation Networks</li> </ul>	Term effective through 31 December 2011
Zhi Ding	<ul style="list-style-type: none"> <li>• Hybrid ARQ and Retransmission Diversity Optimization in Wireless Communications</li> <li>• Approaches to Wireless MIMO Channel Feedback</li> <li>• Cognitive Wireless Networks</li> <li>• Optimum Transmitter Precoding in Hybrid ARQ for Wireless MIMO Communications</li> <li>• Fast Wireless Source Localization and Sensor Placement</li> <li>• Quadratic Programming in Blind Equalization</li> </ul>	Term effective through 31 December 2009



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Mischa Dohler	<ul style="list-style-type: none"><li>● Machine-to-Machine: Technologies, Standards and Applications</li><li>● ICT Technologies in Smart Cities and Smart Grids</li><li>● Femtocells: Technologies, Standards and Applications</li><li>● Cognitive and Docitive Networks</li><li>● Design Principles Towards 5G High-Capacity System</li><li>● The Tactile Internet - The Next Tech Frontier?</li><li>● Is 5G Going To Power The IoT?</li><li>● Research, Innovation &amp; Entrepreneurship in a 21st Century Ecosystem</li></ul>	Term effective through 31 December 2015
Klaus Dostert	<ul style="list-style-type: none"><li>● Possibilities and Limitations of Broadband over Power Lines (BPL) or Power Line Communication (PLC)</li><li>● Channel Models for the Electrical Power Distribution Grid as a Communication Medium (Simulation &amp; Emulation)</li><li>● Aspects of BPL or PLC Modem Design, Based on Multi-Carrier Signaling</li><li>● Analysis and Solutions for EMC Issues with BPL or PLC</li></ul>	Term effective through 31 December 2008
Falko Dressler	<ul style="list-style-type: none"><li>● Inter-Vehicular Communication: Protocols and Simulation Techniques</li><li>● Self-Organization in Sensor and Actor Networks</li><li>● Biologically-inspired and Nano-scale Communication and Networking</li></ul>	Term effective through 31 December 2012
Tarek S. El-Bawab	<ul style="list-style-type: none"><li>● Telecommunication Engineering Education (TEE)</li><li>● Broadband Access</li><li>● Telecommunication Standards</li></ul>	Term effective through 31 December 2019

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<p>Jaafar Elmirghani</p>	<ul style="list-style-type: none"> <li>● Energy efficient core networks</li> <li>● Green content distribution networks</li> <li>● Network and data centre virtualization</li> <li>● Data centre disaggregation</li> <li>● Optical networks in data centres</li> <li>● Energy efficient core networks</li> <li>● Renewable energy in core and data centre networks</li> <li>● Energy efficient Peer-to-Peer and IPTV networks</li> <li>● Visible light communications</li> <li>● Optical wireless communication systems</li> <li>● Multigigabit indoor optical wireless multi-user and cooperative systems</li> </ul>	<p>Term effective through 31 December 2016</p>
<p>Tony Ephremides</p>	<ul style="list-style-type: none"> <li>● Wireless Ad Hoc Networks</li> <li>● Network Coding As A New Paradigm In Networking</li> <li>● Energy Efficiency In Wireless Networks</li> <li>● Cross-Layer Issues In Network Design</li> <li>● Sensor Networks</li> <li>● Stability Issues In Wireless Networks</li> <li>● Power Control In Ad Hoc Networks</li> <li>● New Directions And Challenges In Wireless Networking</li> </ul>	<p>Term effective through 31 December 2009</p>
<p>Javan Erfanian</p>	<ul style="list-style-type: none"> <li>● End-to-end Wireless Technology Evolution</li> <li>● New Paradigms and Future Service Environment</li> <li>● Emerging User Requirements &amp; Key Research Areas</li> </ul>	<p>Term effective through 31 December 2008</p>
<p>Yuguang Michael Fang</p>	<ul style="list-style-type: none"> <li>● A few selected research issues in wireless networks</li> <li>● Cross-layer design for wireless networks</li> <li>● Securing resource-constrained wireless networks</li> <li>● Small world phenomena in wireless ad hoc networks</li> <li>● Secure network connectivity and capacity</li> <li>● Privacy and security for mobile healthcare systems</li> <li>● Wireless medium access control protocols</li> </ul>	<p>Term effective through 31 December 2015</p>

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Xavier Fernando	<ul style="list-style-type: none"><li>● Radio over Fiber Systems</li><li>● Communication Requirements for the Smart Grid</li><li>● Wireless Sensor Networks for Smart, Green Buildings</li><li>● Wireless Communications for the Aerospace Industry</li><li>● Low Interference Wireless Communications for Biomedical Application</li><li>● Underground Communication Systems for Saving Miners Life</li></ul>	Term effective through 31 December 2013
Nelson Fonseca	<ul style="list-style-type: none"><li>● Networking for Big Data</li><li>● Cloud Networking</li></ul>	Term effective through 31 December 2018
Xiaoming Fu	<ul style="list-style-type: none"><li>● Content Distribution: From Client/Server to Content-Oriented Publish/Subscribe System</li><li>● Scaling Microblogging Services with Divergent Traffic Demands</li><li>● Network Friendly TCP for Background Delay-Insensitive Applications</li></ul>	Term effective through 31 December 2015

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Jacob Gavan	<ul style="list-style-type: none"> <li>● Radio Frequency Systems Interference and Radiation Effects: Analysis, Computation and Mitigation Techniques</li> <li>● Radio Systems Collocation Non Linear Mutual Interference Effects: Analysis, Computation and Mitigation Techniques</li> <li>● Electromagnetic Analysis and Simulation of RF base stations and Headsets Radiation Effects and Development of Mitigation Techniques</li> <li>● RADAR and LADAR multimode systems for detection and tracking cooperative targets with optimum accuracy and operation ranges</li> <li>● Stratospheric Quasi Stationary Platforms (SQSP) as complement to Ground Cellular Systems for Improving Radio-Communication Performances</li> <li>● Hypothesis of Hornets (or other Flying Creatures) Biological RADAR and Direction Finding Systems and Future Applications</li> <li>● Overview of Navigation Techniques Leading to Global Positioning Systems with Optimum Reliability and Accuracy</li> <li>● Overview of Mobile Satellite Systems</li> <li>● Overview of Smart Antennas</li> <li>● Radio Frequency Identification Devices (RFID) EMC performances: Analysis and Mitigation Techniques</li> </ul>	Term effective through 31 December 2009
Erol Gelenbe	<ul style="list-style-type: none"> <li>● Smart Networks at the Edge</li> <li>● Networks for Emergency Management</li> <li>● Cognitive Packet Networks</li> <li>● Bio-Inspired Networks</li> <li>● Auction Systems and E-Commerce</li> <li>● Product Form Networks – Discovery or Invention?</li> <li>● Search in Infinite Unknown Environments</li> </ul>	Term effective through 31 December 2014
Alex Gelman	<ul style="list-style-type: none"> <li>● Standardization Activities in IEEE - A Service to the Membership, Industry, and Humanity</li> </ul>	Term effective through 31 December 2012
Hamid Gharavi	<ul style="list-style-type: none"> <li>● Wireless Multimedia Communications</li> <li>● Ad-hoc Networks Systems &amp; Applications</li> </ul>	Term effective through 31 December 2006

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Jerry Gibson	<ul style="list-style-type: none"> <li>● Voice and Video over Wireless Local Area Networks</li> <li>● Voice Capacity under Quality Constraints for IEEE 802.11a Wireless LANs</li> <li>● Multiple Descriptions and Path Diversity for Voice Communications over Wireless Mesh Networks</li> </ul>	Term effective through 31 December 2006
Roch Glitho	<ul style="list-style-type: none"> <li>● Next Generation Networks</li> <li>● IP Telephony</li> <li>● Architectures for End User Services</li> <li>● Network Interworking</li> </ul>	Term effective through 31 December 2009
Andrea Goldsmith	<ul style="list-style-type: none"> <li>● Capacity Limits of Wireless Channels/Networks</li> <li>● Multiple-Antennas in Wireless Links/Networks</li> <li>● Space-Time-Frequency Agile Radios</li> <li>● Energy-Constrained Communication</li> <li>● Cross Layer Design of Wireless Systems</li> <li>● Wireless Ad Hoc and Sensor Network Design</li> <li>● Multimedia over Wireless</li> <li>● Distributed Control over Wireless Networks</li> </ul>	Term effective through 31 December 2010
Fabrizio Granelli	<ul style="list-style-type: none"> <li>● Green wireless networking: energy efficiency in wireless networks</li> <li>● Cognitive and adaptive networking: self-management at the service of network evolution</li> <li>● Networking and the Smart Grid: the relevance of communications in the future of power grid</li> <li>● Design of green networks: towards the Green Internet</li> </ul>	Term effective through 31 December 2015
Song Guo	<ul style="list-style-type: none"> <li>● Cross-Cloud Resource Management for Big Data</li> <li>● Traffic-aware Geo-distributed Big Data Analytics with Predictable Performance</li> <li>● Robust Incentive Mechanisms for Cognitive Radio Networks</li> <li>● Device-to-Device Communication in Cellular Networks</li> </ul>	Term effective through 31 December 2017

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Andrei Gurtov	<ul style="list-style-type: none"><li>• Software Defined Mobile Networks: Beyond LTE Network Architecture</li><li>• Introduction to Host Identity Protocol and Its Practical Applications</li><li>• Security and Smartness for Medical Sensor Networks*Design and Implementation of Secure Distributed Systems and Networks</li><li>• Fair bandwidth allocation in datacenters</li></ul>	Term effective through 31 December 2019
Zygmunt J. Haas	<ul style="list-style-type: none"><li>• Ad Hoc Networking Technology: from Research to Applications</li><li>• Scalability of Wireless Networks</li><li>• Security in Wireless Networks</li><li>• Biologically-Inspired Networks and Systems</li><li>• Sensor Networks</li></ul>	Term effective through 31 December 2007
Ibrahim Habib	<ul style="list-style-type: none"><li>• GMPLS Control of IP optical Networks</li><li>• Architecture Design of Metro Optical Networks</li><li>• Traffic Engineering and QoS in Next Generation Networks</li><li>• Wireless Local and Metro Area Networks</li><li>• 3G and Beyond Networks</li></ul>	Term effective through 31 December 2007
Bechir Hamdaoui	<ul style="list-style-type: none"><li>• Cognitive radio and dynamic spectrum access networking</li><li>• Green datacenters</li><li>• Cloud computing resource management</li><li>• Network virtualization and cloud of things</li><li>• Heterogeneous networks</li></ul>	Term effective through 31 December 2017

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Zhu Han	<ul style="list-style-type: none"> <li>● Big Data In Smart Grid</li> <li>● Resource Management for Device-to-Device Communications</li> <li>● Physical Layer Security: A Network Optimization Point of View</li> <li>● Resource Allocation for Full-Duplex Communication and Networks</li> <li>● Smart Grid Communications and Networking</li> <li>● Game Theory for Wireless Networks</li> <li>● Contract Theory for Wireless Networks</li> <li>● Matching Theory for Wireless Networks</li> <li>● Compressive Sensing and its Application</li> <li>● RF Energy Harvesting Networks</li> </ul>	Term effective through 31 December 2018
Lajos Hanzo	<ul style="list-style-type: none"> <li>● Wireless Multimedia Turbo-transceivers</li> <li>● Wireless Video Communications</li> <li>● Joint Source- and Channel Coding</li> <li>● Near-Instantaneously Adaptive Wireless Single-Carrier, OFDM and CDMA Systems</li> <li>● Turbo Coding, Turbo Equalisation and Space-Time Coding</li> <li>● Standard-Oriented, Channel-Quality Motivated, Service-Related and Algorithmic Aspects of Software-Controlled Radios</li> <li>● Research in Single- and Multi-Carrier CDMA</li> <li>● Research aspects of OFDM</li> <li>● Cross-layer optimization in Wireless Communications</li> <li>● Genetic Algorithms in Wireless Communications</li> <li>● Smart Antennas in Wireless Communications</li> <li>● Advanced Wireless Networking</li> </ul>	Term effective through 31 December 2007
Fred Harris	<ul style="list-style-type: none"> <li>● Synchronizing Digital Receivers</li> <li>● DSP to Improve Receiver Performance(I-Q Mismatch, DC-Cancel, etc)</li> <li>● DSP in Modern Digital Communications</li> <li>● OFDM from A DSP Perspective</li> <li>● Software Defined Radio</li> <li>● Channelized Receivers</li> <li>● A Short History of Radio</li> </ul>	Term effective through 31 December 2009

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Mahbub Hassan	<ul style="list-style-type: none"> <li>● Vehicular Communications and Networking</li> <li>● Content Streaming for Mobile Devices</li> <li>● Nano-scale Communications and Networking</li> </ul>	Term effective through 31 December 2016
Hossam Hassanein	<ul style="list-style-type: none"> <li>● Enabling Ubiquitous Mobile Services</li> <li>● Next Generation Broadband Wireless Access Networks</li> <li>● Resource Management in Heterogeneous Wireless Networks</li> <li>● Enabling Mobile Computing in Wireless Ad hoc Networks</li> <li>● Planning and Device Deployment in Wireless Sensor Networks</li> </ul>	Term effective through 31 December 2010
Tom Hou	<ul style="list-style-type: none"> <li>● Advances on Interference Management in Wireless Networks</li> <li>● MIMO in Multi-hop Wireless Networks</li> <li>● New Spectrum Sharing and Cooperation Paradigms for Cognitive Radio Networks</li> <li>● Wireless Ad Hoc and Sensor Networks for Cyber Physical Systems</li> <li>● Wireless Energy Transfer for Wireless Sensor Networks</li> <li>● Applied Optimization Methods for Wireless Networks</li> </ul>	Term effective through 31 December 2018
Rose Qingyang Hu	<ul style="list-style-type: none"> <li>● Design and performance of 5G wireless communications and Networks</li> <li>● Spectral efficient and energy efficient wireless network design and tradeoff</li> <li>● Device to Device communications underlay cellular networks</li> </ul>	Term effective through 31 December 2018
Jianwei Huang	<ul style="list-style-type: none"> <li>● Incentive Mechanisms for User-Provided Networks</li> <li>● Mobile Data Offloading</li> <li>● Graphical Congestion Games</li> <li>● Cognitive Virtual Network Operator Games</li> <li>● Economics of Cooperative Spectrum Sharing</li> <li>● Economics of TV White Space</li> </ul>	Term effective through 31 December 2018



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Heather E. Hudson	<ul style="list-style-type: none"> <li>● From Rural Village to Global Village: The Role of Telecommunications in Socio-Economic Development</li> <li>● Bridging the Broadband Divide: Strategies for Rural and Developing Regions</li> <li>● Universal Service Funds: Accelerators or Anachronisms?</li> <li>● Broadband Policies and Funding Strategies in North America (Canada and U.S.)</li> <li>● Rethinking Remoteness: VOIP, YouTube, and Development</li> <li>● Rural Telemedicine: Lessons from Alaska</li> <li>● Municipal Broadband: Lessons from the U.S. Experience</li> <li>● The Wireless Explosion: Connectivity for the Developing World</li> </ul>	Term effective through 31 December 2011
Syed Jafar	<ul style="list-style-type: none"> <li>● Interference Alignment</li> <li>● Index Coding</li> </ul>	Term effective through 31 December 2014
Hamid Jafarkhani	<ul style="list-style-type: none"> <li>● Distributed Beamforming in Wireless Relay-Interference Networks</li> <li>● Cooperative Communications</li> <li>● Limited Feedback Beamforming in MIMO</li> <li>● Distributed Space-Time Coding</li> </ul>	Term effective through 31 December 2015
Raj Jain	<ul style="list-style-type: none"> <li>● Computer Networking: Recent Developments, Trends, and Issues</li> </ul>	Term effective through 31 December 2006
Andrzej Jajszczyk	<ul style="list-style-type: none"> <li>● Next-Generation Networking Solutions &amp; Challenges</li> <li>● Towards Automatically Switched Optical Networks (ASON)</li> </ul>	Term effective through 31 December 2005
Gabriel Jakobson	<ul style="list-style-type: none"> <li>● Introduction to Situation Management of Complex Networks and Systems Operations</li> <li>● Introduction to Cognitive Situation Management of Tactical Operations</li> <li>● Cyber Security Situation Awareness and Impact Assessment: Issues, Models and Applications</li> </ul>	Term effective through 31 December 2013

# IEEE Communications Society

## Past Distinguished Lecturers

Last updated 1/2/2020

	<ul style="list-style-type: none"> <li>• New Directions in Cyber Security: Achieving Cyber Attack Tolerant Missions and Business Processes</li> </ul>	
Gabe Jakobson	<ul style="list-style-type: none"> <li>• The Principles of Dynamic Event and Situation Management</li> <li>• Introduction to Cognitive Information Fusion and Operational Situation Management</li> <li>• Introduction to Event Correlation Models, Solutions and Applications</li> <li>• Real-Time Network Fault and Alarm Management</li> <li>• Management of Dynamic Networks and Services Based on Distributed Event Correlation</li> <li>• The Technology and Practice of Integrated Multi-Agent Event Correlation Systems</li> </ul>	Term effective through 31 December 2009
Abbas Jamalipour	<ul style="list-style-type: none"> <li>• Broadband Wireless IP</li> <li>• Next Generation Mobile Network Architectures</li> <li>• Heterogeneous Mobile Cellular Networks</li> </ul>	Term effective through 31 December 2009
Anura Jayasumana	<ul style="list-style-type: none"> <li>• Internet of Things: A pervasive Technology for Innovation</li> <li>• Network Aware Nodes: A Novel Self-Organization Approach for Internet of Things</li> <li>• Topology Coordinate Systems - A Localization Free Approach for Self-Organization of Large-Scale 2D and 3D Sensor Networks</li> <li>• On Modeling and Measurement of Networks and Network-based Information</li> <li>• Detection of Anomalies and Weak Distributed Patterns in Networks</li> <li>• Peer-to-Peer Networks: File Sharing to Collaborative Computing</li> </ul>	Term effective through 31 December 2017
Admela Jukan	<ul style="list-style-type: none"> <li>• Design and Performance of Ethernet-over-Optical Network Systems</li> <li>• A Network Management Perspective on Internet-optical Service Convergence</li> <li>• Theory and Practice of Network Technology Migration to Software Defined Networking</li> </ul>	Term effective through 31 December 2016

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## Past Distinguished Lecturers

Last updated 1/2/2020

Ahmed Kamal	<ul style="list-style-type: none"> <li>• Multicasting in Cognitive Radio Networks</li> </ul>	Term effective through 31 December 2014
George Karagiannidis	<ul style="list-style-type: none"> <li>• Optical Wireless Communications</li> <li>• Non-orthogonal Multiple Access</li> <li>• Communications in the THz band</li> <li>• Low Power Wide Area Networks</li> </ul>	Term effective through 31 December 2019
Stamatis Kartalopoulos	<ul style="list-style-type: none"> <li>• DWDM Technology and Optical Networks for Beginners</li> <li>• DWDM Optical Networks</li> <li>• DWDM Technology</li> <li>• Next-Generation Intelligent Optical Networks</li> <li>• Mesh Free-Space (or Wireless) Optical Networks</li> <li>• Introduction to Network Security</li> <li>• Introduction to Quantum Cryptography</li> <li>• Neural Networks and Fuzzy Logic</li> </ul>	Term effective through 31 December 2010
Nei Kato	<ul style="list-style-type: none"> <li>• Ad Hoc &amp; Mesh &amp; Sensor Networks: Recent Trends and Future directions</li> <li>• D2D: Research Trends and Future Perspective</li> </ul>	Term effective through 31 December 2016
Mohsen Kavehrad	<ul style="list-style-type: none"> <li>• Multi-Input Multi-Output (MIMO); Potential Applications – Myth and Reality</li> <li>• Multi-band, Multi-service, Sensing Metamaterials; Myth &amp; Reality</li> <li>• Optical Wireless Applications - A Solution to Ease the Wireless Airwaves Spectrum Crunch</li> <li>• Optical Wireless: Theory and Applications</li> <li>• Reconfigurable Optical Wireless Applications in Data Centers</li> <li>• Academic / Industrial Engineering Experience</li> </ul>	Term effective through 31 December 2017

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## Past Distinguished Lecturers

Last updated 1/2/2020

Bhumip Khasnabish	<ul style="list-style-type: none"> <li>• New Generation of Networking</li> <li>• Multimedia Services Peering</li> <li>• Evolution of IP Multimedia Subsystem (IMS)</li> <li>• Harmonization of Network/Service Elements</li> <li>• Convergence: Service and Network Viewpoints</li> </ul>	Term effective through 31 December 2010
Marwan Krunz	<ul style="list-style-type: none"> <li>• Dynamic spectrum access and cognitive radio networks</li> <li>• Physical-layer wireless security</li> <li>• Cooperative MIMO communications</li> <li>• Energy management in wireless sensor networks</li> </ul>	Term effective through 31 December 2014
Lutz Lampe	<ul style="list-style-type: none"> <li>• Power Line Communications - Advanced Signal Processing and Communication Theory</li> <li>• Power Line Communications - From Home Networking to Smart Grid</li> <li>• Physical Communications Techniques for Smart Grid</li> </ul>	Term effective through 31 December 2013
Tho Le-Ngoc	<ul style="list-style-type: none"> <li>• Advances in Broadband Access Communications</li> <li>• Multimedia Satellite Communications</li> <li>• Adaptive Transmission and Dynamic Resource Allocation</li> <li>• Broadband xDSL Access Communications</li> <li>• Collaborative &amp; Cognitive Communications</li> </ul>	Term effective through 31 December 2009
Alberto Leon-Garcia	<ul style="list-style-type: none"> <li>• Carrier-Class Peer-to-Peer Networking</li> <li>• What is an Application Oriented Network?</li> <li>• Towards Autonomic Networks</li> </ul>	Term effective through 31 December 2009
Khaled Letaief	<ul style="list-style-type: none"> <li>• Broadband Wireless Access in Next-generation Wireless Networks</li> <li>• 3G Mobile Systems</li> <li>• Access Technologies for B4G Wireless Systems</li> </ul>	Term effective through 31 December 2008

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## Past Distinguished Lecturers

Last updated 1/2/2020

Victor C. Leung	<ul style="list-style-type: none"> <li>● Service and Network Convergence in Next Generation Networks</li> <li>● Mobile Agents in Wireless Sensor Networks</li> <li>● Wireless Networks for Vehicle-Infrastructure Integration</li> <li>● From WPAN to WBAN: Short Range Packet Communications</li> </ul>	Term effective through 31 December 2012
Tiffany Jing Li	<ul style="list-style-type: none"> <li>● Wireless Networked Communication: Unifying Source Coding, Channel Coding, and Network Coding</li> <li>● Order Out of Chaos: A New Paradigm of Error Correction Coding with Application to Sensor Networks and Image Transmission</li> <li>● Linear Analog Codes: The Good, the Bad and the Unknown</li> <li>● Exploring A New Face of Turbo Codes: From Binary Codes to Real Number Codes</li> <li>● Theory and Practice of Distributed Source Coding: Generality, Optimality, and Rate Adaptivity</li> <li>● Wireless Localization: The Challenging Cases of Indoor, 3D and Network Localization</li> </ul>	Term effective through 31 December 2013
Bo Li	<ul style="list-style-type: none"> <li>● Optical Networks, specifically on WDM Systems</li> <li>● Wireless Networks (Cellular Systems)</li> <li>● Wireless Ad Hoc Networks and Sensor Networks</li> <li>● Multimedia Communications, specifically related to video communications and video multicast</li> <li>● General topics in computer networks and Internet</li> <li>● Peer-to-Peer systems</li> </ul>	Term effective through 31 December 2007
Geoffrey Ye Li	<ul style="list-style-type: none"> <li>● From OFDM and SC-FDE to EST-based Modulation</li> <li>● Joint Physical and MAC Layer Optimization for Wireless Networks: Centralized</li> <li>● Joint Physical and MAC Layer Optimization for Wireless Networks: Distributed</li> <li>● Signal Processing Issues in Cognitive Radios</li> </ul>	Term effective through 31 December 2010

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## Past Distinguished Lecturers

Last updated 1/2/2020

Jin Li	<ul style="list-style-type: none"> <li>● Locality aware P2P delivery: the way to scale Internet Video</li> <li>● Towards Glitch Free VoIP and Video Conferencing</li> <li>● Data in the Cloud: Design of Efficient Storage Systems</li> <li>● High Performance Enterprise Computing with Solid State Drive (SSD)</li> </ul>	Term effective through 31 December 2012
Ying-Chang Liang	<ul style="list-style-type: none"> <li>● Cognitive Radio Networks</li> <li>● Cooperative Wireless Communications</li> </ul>	Term effective through 31 December 2014
Wanjiun Liao	<ul style="list-style-type: none"> <li>● Green communications and networking</li> <li>● Wireless multimedia networking</li> <li>● Cloud-aware data center networking</li> </ul>	Term effective through 31 December 2012
Ying-Dar Lin	<ul style="list-style-type: none"> <li>● Research Roadmap Driven by Network Benchmarking Lab: Deep Packet Inspection, Traffic Forensics, Embedded Benchmarking, WLAN/LTE, and Beyond</li> <li>● Traffic Forensics: Capture, Replay, Classification, Detection, and Analysis</li> <li>● Benchmarking Smartphones: Methodologies, Tools, and Results</li> <li>● Open Source Resources for Networking</li> <li>● Software Defined Networking: Why, Where, When, and How</li> <li>● Experience Sharing on International Academic Services and Research</li> </ul>	Term effective through 31 December 2018
Jiajia Liu	<ul style="list-style-type: none"> <li>● Fundamental Performance Analysis in Two-Hop Relay Mobile Ad Hoc Networks</li> <li>● Cooperative Jamming in Wireless Networks with Eavesdroppers at Arbitrary Locations</li> <li>● Device-to-Device Communication for Load Balancing and Coverage Extension in LTE-Advanced Networks</li> <li>● Advanced Ad Hoc and Mesh Networks: From Theoretical to Practical</li> </ul>	Term effective through 31 December 2017

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## Past Distinguished Lecturers

Last updated 1/2/2020

Pascal Lorenz	<ul style="list-style-type: none"> <li>● NGN (Next Generation Networks)</li> <li>● QoS and QoE</li> <li>● Networking Protocols</li> <li>● Wireless LAN and Broadband Internet</li> <li>● Service and Network Convergence</li> </ul>	Term effective through 31 December 2014
Maode Ma	<ul style="list-style-type: none"> <li>● Security Enhancements over the Communication Networks in Smart Grid</li> <li>● Security Enhancement for M2M in Cyber-Physical Systems</li> <li>● Enhance Security Functionality for M2M in 6LoWPANs</li> <li>● Migration of IP Network to the SDN Network</li> <li>● Bandwidth Efficient Multicast in HetNets</li> </ul>	Term effective through 31 December 2016
Manu Malek	<ul style="list-style-type: none"> <li>● Security and Information Assurance</li> <li>● WLAN Security</li> </ul>	Term effective through 31 December 2006
Narayan Mandayam	<ul style="list-style-type: none"> <li>● Backhauling in TV White Spaces</li> <li>● Network Coding as a Dynamical System</li> <li>● Enabling Cognitive Radio Networks</li> <li>● Green Techniques for Wireless Communications</li> <li>● Forces and Strategies that Shaped the Wireless Revolution</li> </ul>	Term effective through 31 December 2015
Athanassios Manikas	<ul style="list-style-type: none"> <li>● Wireless positioning, localisation and tracking using large aperture antenna arrays</li> <li>● Antenna array manifolds and channel capacity</li> <li>● Spatiotemporal channel estimation and interference cancellation</li> <li>● Space-time beamformers with massive mainlobe gain using an antenna array with limited number of antennas</li> <li>● Massive and spatiotemporal MIMO: comparative studies of “non-parametric” and “parametric” approaches</li> <li>● Designing and analysing current and future communication systems using Differential Geometry</li> </ul>	Term effective through 31 December 2017

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## Past Distinguished Lecturers

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George Mattathil	<p>Network Industry Dynamics: There is lack of appreciation of the tradeoffs between packet/circuit technologies in the industry. This topic can be covered from three perspectives:</p> <ul style="list-style-type: none"> <li>● Technical (product design)</li> <li>● Market (product marketing)</li> <li>● Business strategy</li> </ul>	Term effective through 31 December 2007
Madjid Merabti	<ul style="list-style-type: none"> <li>● Critical Infrastructure Protection: A 21st Century Challenge</li> <li>● Sharing Human Digital Memories – Practical Challenges</li> <li>● The Challenge of Society in the 21st Century- Being Remote but Always Connected</li> <li>● Wireless Networking a State of the Art</li> <li>● The State of the Art in Network Security Research</li> <li>● Security in Ubiquitous Computing Environments</li> <li>● On Line Games and Security</li> <li>● Networked Appliances and Computer Entertainment</li> </ul>	Term effective through 31 December 2012
Urbashi Mitra	<ul style="list-style-type: none"> <li>● Biological Communication Systems: Engineered and Natural</li> <li>● Sparse Approximation for Large Scale Wireless Network Learning and Control</li> <li>● Wireless channel Estimation: Opportunities for Exploiting Structure and Sparsity</li> </ul>	Term effective through 31 December 2016
Andreas Molisch	<ul style="list-style-type: none"> <li>● MIMO propagation channels</li> <li>● Antenna selection in MIMO systems</li> <li>● Ultrawideband impulse radio: from theory to practice</li> <li>● Ultrawideband propagation channels and their impact on system design</li> <li>● Cooperative communications for adh-hoc networks and infrastructure-based systems</li> </ul>	Term effective through 31 December 2019
Hussein Mouftah	<ul style="list-style-type: none"> <li>● Advances in Photonic Packet Switching Networks</li> </ul>	Term effective through 31 December 2006



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## Past Distinguished Lecturers

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	<ul style="list-style-type: none"> <li>• How to Make Optical Networks Survivable</li> </ul>	
Zhisheng Niu	<ul style="list-style-type: none"> <li>• A Paradigm Shift to Globally Resource-optimized and Energy-Efficient Networks (GREEN)</li> <li>• TANGO: Traffic-Aware Network planning and Green Operation</li> <li>• CHORUS: Collaborative and Harmonized Open Radio Ubiquitous Systems</li> <li>• Collaborative Radio Resource Management in Multiple Radio Networks</li> </ul>	Term effective through 31 December 2015
Dusit Niyato	<ul style="list-style-type: none"> <li>• Economic Analysis and Pricing Models of Internet-of-Things (IoT)</li> <li>• Wireless Powered Communications Networks: Architectures, Protocol Designs, and Standardization</li> </ul>	Term effective through 31 December 2017
Sedat Oelcer	<ul style="list-style-type: none"> <li>• Magnetic Storage Systems: State-of-the-Art and Market Trends</li> <li>• A 50 Year Journey in Tape Storage</li> </ul>	Term effective through 31 December 2007
Constantinos Papadias	<ul style="list-style-type: none"> <li>• Basics of MIMO systems</li> <li>• Multi-user and Cooperative MIMO Systems</li> <li>• Compact Antennas for MIMO Communication</li> </ul>	Term effective through 31 December 2013
Stefan Parkvall	<ul style="list-style-type: none"> <li>• LTE, IMT-Advanced, and beyond</li> <li>• Future radio access - challenges</li> </ul>	Term effective through 31 December 2012
Neeli Prasad	<ul style="list-style-type: none"> <li>• Internet of Things (IoT), Machine to Machine (M2M) and enabling technologies</li> <li>• Secure Frameworks and Architectures</li> <li>• Social Networking</li> <li>• Smart cities and communities</li> </ul>	Term effective through 31 December 2014

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## Past Distinguished Lecturers

Last updated 1/2/2020

Michael Pursley	<ul style="list-style-type: none"> <li>• Energy-Efficient Routing in Mobile Frequency-Hop Ad Hoc Networks</li> <li>• Cross-Layer Protocols for Mobile Spread-Spectrum Ad Hoc Networks</li> </ul>	Term effective through 31 December 2006
Chunming Qiao		Term effective through 31 December 2012
K. K. Ramakrishnan	<ul style="list-style-type: none"> <li>• Networking the Cloud: Enterprise-ready Cloud Computing and Storage Services</li> <li>• Building an end-end nationwide IPTV service</li> <li>• QoS and Traffic Management in Data Networks</li> <li>• LANs, MANs and Access Networks</li> <li>• Congestion Control</li> </ul>	Term effective through 31 December 2013
Pradeep Ray	<ul style="list-style-type: none"> <li>• Cooperative Service Management in Healthcare Sector</li> <li>• Towards ubiquitous healthcare in the world: emerging trends and challenges</li> <li>• eHealth and Telemedicine</li> <li>• ubiquitous Healthcare Infrastructure</li> <li>• mHealth for the Elderly</li> <li>• Ontologies for the Interoperability and Integration of Healthcare Information Systems</li> </ul>	Term effective through 31 December 2015
George (Gee) Rittenhouse	<ul style="list-style-type: none"> <li>• Future of Wireless Networking</li> </ul>	Term effective through 31 December 2008
Keith Ross	<ul style="list-style-type: none"> <li>• Third Party Privacy Invasion: Attacks and Solutions</li> </ul>	Term effective through 31 December 2014
George Rouskas	<ul style="list-style-type: none"> <li>• Power-aware and computationally efficient optical network design</li> <li>• Net SILO: Architectural support for Internet evolution and innovation</li> <li>• A framework for hierarchical traffic grooming in optical networks</li> </ul>	Term effective through 31 December 2011

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## Past Distinguished Lecturers

Last updated 1/2/2020

Sumit Roy	<ul style="list-style-type: none"> <li>• Cognitive Radio - Algorithms &amp; Architectures</li> <li>• Co-existence in a Multi-radio Environment: Principles, Architectures and Implementations</li> <li>• White Space Networks: From TV bands to Government Users</li> </ul>	Term effective through 31 December 2018
Edward (Ted) H. Sargent	<ul style="list-style-type: none"> <li>• Nanotechnology and Stimulated Self-assembly</li> <li>• Self-organized Photonic Structures for Optical Signal Processing</li> <li>• Solution-processed Infrared-emitting Quantum Dots for Optics-electronics Integration</li> </ul>	Term effective through 31 December 2006
Hikmet) Sari	<ul style="list-style-type: none"> <li>• Broadband Wireless Access</li> <li>• Broadband Cable Access</li> </ul>	Term effective through 31 December 2006
Robert Schober	<ul style="list-style-type: none"> <li>• Molecular Communication for Future Nanonetworks</li> <li>• Wireless Powered Communication Systems: Overview, Recent Results, and Challenges</li> <li>• Buffer-aided relaying: Introduction, Recent Advances, and Challenges</li> </ul>	Term effective through 31 December 2018
Henning Schulzrinne	<ul style="list-style-type: none"> <li>• VoIP - Beyond Replicating the Limitations of the Past</li> <li>• Next-Generation Emergency Calling (NG911)</li> <li>• The Vision and Reality of Ubiquitous Computing</li> <li>• Making VoIP and WiFi Play Nice Together</li> </ul>	Term effective through 31 December 2009
Dominic Schupke	<ul style="list-style-type: none"> <li>• Resilience in Network Virtualization</li> <li>• Multi-Layer Networking</li> </ul>	Term effective through 31 December 2014
Abdallah Shami	<ul style="list-style-type: none"> <li>• Achieving High Availability for Multi-Tiered Cloud-Based Applications</li> <li>• Network Function Virtualization</li> <li>• Wireless Network Virtualization</li> </ul>	Term effective through 31 December 2017
Gangxiang Shen	<ul style="list-style-type: none"> <li>• Optical networks</li> <li>• Green network communications</li> </ul>	Term effective through 31 December 2019

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## Past Distinguished Lecturers

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	<ul style="list-style-type: none"> <li>• Network survivability</li> <li>• Fiber-wireless integration</li> <li>• Content delivery networks (CDN)</li> </ul>	
Xuemin (Sherman) Shen	<ul style="list-style-type: none"> <li>• Resource management of Wireless Networks</li> <li>• Medical Body Area Networks</li> </ul>	Term effective through 31 December 2010
Kazem Sohraby	<ul style="list-style-type: none"> <li>• Emerging Transmission Technologies</li> <li>• Emerging Switching Technologies</li> </ul>	Term effective through 31 December 2006
Arun K. Somani	<ul style="list-style-type: none"> <li>• Monitoring the US Power Grid Using Wireless Sensor Networks</li> <li>• Survivable Path Level Traffic Grooming in WDM Optical Networks</li> <li>• Capacity-Balanced Efficient Protection and Grooming Optical Architecture</li> <li>• RDFN - Robust, Dynamic and Fair or (Real-Damn-Fast) Network</li> <li>• Wavelength-Division-Multiplexing-Based Networks: Issues and Challenges</li> <li>• Issues in Optical Interconnection of LANs</li> <li>• End-to-End Packets and Circuits over Fiber</li> <li>• Fault and Attack Management in Optical Network</li> </ul>	Term effective through 31 December 2012
Lingyang Song	<ul style="list-style-type: none"> <li>• Full-Duplex Wireless Communications: Key Technologies and Applications</li> <li>• Device-to-Device Communications and Networks</li> <li>• Smart Grid Communications and Networking</li> <li>• Signal Processing and Resource Allocation for Physical-Layer Security</li> <li>• Game-theoretic Methods for Wireless Communications</li> </ul>	Term effective through 31 December 2018
Rayadurgam Srikant	<ul style="list-style-type: none"> <li>• Network Optimization, Architecture and Algorithms</li> <li>• Distributed Scheduling Algorithms for Wireless Networks</li> <li>• Shadow-Queue Architecture for Adaptive Routing and Scheduling</li> </ul>	Term effective through 31 December 2012

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## *Past Distinguished Lecturers*

Last updated 1/2/2020

James Sterbenz	<ul style="list-style-type: none"> <li>● Resilient, survivable, and disruption-tolerant mobile wireless networking</li> <li>● Programmable, adaptive, extensible, and active networks</li> <li>● High-speed networking architecture, technology, and design principles</li> </ul>	Term effective through 31 December 2007
Gordon Stüber	<ul style="list-style-type: none"> <li>● MIMO Mobile-to-Mobile Channel Modeling</li> <li>● Synchronization for MIMO-OFDM</li> <li>● Cognitive Radio in DTV Bands</li> </ul>	Term effective through 31 December 2008
Tatsuya Suda	<ul style="list-style-type: none"> <li>● Molecular Communication: New Paradigm for Communication Among Nano-Scale Biological Machines</li> <li>● The Bio-Networking Architecture: A Biologically Inspired Approach to the Design of Computer Networks and Network Applications</li> <li>● New Research Directions in Networks: from Sociology to Biology</li> </ul>	Term effective through 31 December 2010
Tarik Taleb	<ul style="list-style-type: none"> <li>● Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks</li> <li>● Congestion Management in 5G Mobile Systems</li> <li>● Mobile Networks As A Cloud Service</li> <li>● Mobile Cloud Networking</li> <li>● Network Function Virtualization: From Architecture to Implementation</li> </ul>	Term effective through 31 December 2017
John Thompson	<ul style="list-style-type: none"> <li>● Green Wireless Communications and Smart Grid Technologies</li> <li>● Multiple Antenna Communications Systems</li> <li>● Wireless relay communications systems and distributed multiple antenna technologies</li> </ul>	Term effective through 31 December 2015
Zhi Tian	<ul style="list-style-type: none"> <li>● Compressive Sensing: Theory, Algorithms and Applications</li> <li>● Cognitive Radio Communications</li> <li>● Wideband Spectrum Sensing for Cognitive Radios</li> <li>● Cooperative and Distributed Sensing for Wireless Sensor Networks</li> </ul>	Term effective through 31 December 2016

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## Past Distinguished Lecturers

Last updated 1/2/2020

Ioannis Tomkos	<ul style="list-style-type: none"><li>• Transparent Optical Networks</li><li>• Impairment Constraint Routing in Wavelength Routed Networks</li><li>• Performance and technology trends in ultra-long-haul optical networks</li><li>• Performance and design issues in metropolitan area optical networks</li></ul>	Term effective through 31 December 2007
Andrea Tonello	<ul style="list-style-type: none"><li>• Power line communications: from vehicular to smart grid applications</li><li>• Power line beyond communications: sensing and diagnostics for power networks</li><li>• The role of communications, sensing and computing in smart grids</li><li>• Filter bank modulation, waveforms and friends for wireless and wireline communications</li><li>• Multiple antenna radio localization: challenges, techniques and applications from smart cars to UAVs</li><li>• The role of communication, localization and control in UAV systems</li></ul>	Term effective through 31 December 2019
Joe Touch	<ul style="list-style-type: none"><li>• A Recursive Network Architecture for the Future Internet</li><li>• An Optical Turning Machine for High-Speed Networking</li><li>• The Case for Weaker Network Security</li><li>• Breaking the Internet Hourglass: One Packet Only and Other Curiosities</li><li>• Internet Policy and Piracy: The Good, the Bad, and the Practical</li></ul>	Term effective through 31 December 2014
Don Towsley	<ul style="list-style-type: none"><li>• Network security</li><li>• The Internet as a complex system</li><li>• Network modeling, analysis, and control</li><li>• P2P applications, overlays, and their interactions with the Internet</li></ul>	Term effective through 31 December 2007

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## Past Distinguished Lecturers

Last updated 1/2/2020

Kishor Trivedi	<ul style="list-style-type: none"> <li>● Survivability Quantification</li> <li>● Software Aging and Rejuvenation</li> <li>● High Availability Software System Assurance</li> <li>● Performability Modelling of Wireless Communication Systems</li> <li>● Performance and Reliability of Composite Web Services</li> <li>● Modeling SIP Application Server Reliability</li> <li>● Stochastic Petri Nets</li> <li>● Reliability and Availability Modeling using the SHARPE Software Package</li> </ul>	Term effective through 31 December 2012
Mehmet Ulema	<ul style="list-style-type: none"> <li>● Management of next generation wireless networks</li> <li>● Management of wireless ad-hoc and sensor networks</li> <li>● Wireless Sensor Networks: Applications, Architectures, Protocols and Management</li> <li>● Network Management: An overview</li> </ul>	Term effective through 31 December 2008
Umit Uyar		Term effective through 31 December 2013
Nitin Vaidya	<ul style="list-style-type: none"> <li>● Wireless Mesh Networks</li> <li>● Protocols for Multi-Channel Wireless Networks</li> <li>● Utilizing Directional Antennas in Multi-Hop Wireless Networks</li> </ul>	Term effective through 31 December 2007
Mihaela van der Schaar	<ul style="list-style-type: none"> <li>● Design Principles for Social Networks</li> <li>● Shannon Revisited: New Separation Principles for Wireless Multimedia</li> <li>● New Classes of Multi-user Communication Games</li> <li>● Mechanism Design for Engineers: The Theory of Intervention Games with Application to Wireless Networks</li> <li>● Network economics</li> </ul>	Term effective through 31 December 2012
Rath Vannithamby	<ul style="list-style-type: none"> <li>● 5G Evolution and Candidate Technologies</li> <li>● M2M Communications for Internet of Things</li> </ul>	Term effective through 31 December 2017

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## Past Distinguished Lecturers

Last updated 1/2/2020

A.J. Han Vinck	<ul style="list-style-type: none"> <li>• Information Theory and Coding Techniques</li> <li>• Applications to Random Access; Memory Systems</li> </ul>	Term effective through 31 December 2009
Jiangzhou Wang	<ul style="list-style-type: none"> <li>• In-building distributed antenna systems for broadband wireless communications</li> <li>• Device to device communications in cellular networks</li> <li>• Small cells and heterogeneous networks</li> <li>• Massive MIMO</li> </ul>	Term effective through 31 December 2014
Chonggang Wang	<ul style="list-style-type: none"> <li>• Internet of Things Architecture, Protocols, and Standards</li> <li>• Service Platform for Machine-to-Machine Communications</li> <li>• Content Management in Information-Centric Networks</li> </ul>	Term effective through 31 December 2016
Moe Win	<ul style="list-style-type: none"> <li>• Fundamentals of Ultrawide Bandwidth (UWB) Systems</li> <li>• Recent Advances in Ultrawide Bandwidth (UWB) Communications Networks</li> </ul>	Term effective through 31 December 2009
Tilman Wolf	<ul style="list-style-type: none"> <li>• Economic Principles for Future Internet Architecture</li> <li>• Attacks and Hardware Defenses for Network Infrastructure</li> <li>• Attack Containment in Off-by-Default Networks</li> <li>• Runtime Management of Multicore Network Processors</li> </ul>	Term effective through 31 December 2017
Chengshan Xiao	<ul style="list-style-type: none"> <li>• Globally Optimal Linear Precoders for Finite Alphabet Signals over Complex Vector Gaussian Channels</li> <li>• Underwater Acoustic Communications: Problems, Challenges and Undersea Experiment Results</li> <li>• Cooperative Multi-user Communications under Finite Alphabet Constraints: Theory and Practice</li> <li>• Wireless Fading Channel Modeling and Simulations</li> </ul>	Term effective through 31 December 2012



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## *Past Distinguished Lecturers*

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Larry G. Xue	<ul style="list-style-type: none"> <li>● Coverage and Connectivity in Wireless Sensor Networks</li> <li>● Cross-layer Optimization for Wireless Mesh Networks</li> <li>● Multiconstrained QoS Routing and Multipath Routing</li> <li>● Robust Localization in Wireless Sensor Networks</li> <li>● Social Networks</li> </ul>	Term effective through 31 December 2011
Liuqing Yang	<ul style="list-style-type: none"> <li>● Underwater Communications and Networking</li> <li>● Resource Optimization in Wireless Communications</li> </ul>	Term effective through 31 December 2017
Halim Yanikomeroglu	<ul style="list-style-type: none"> <li>● Emerging Concepts and Technologies towards 5G+ Wireless Networks</li> <li>● The New Frontier in RAN Heterogeneity: Drone-cells</li> <li>● The IoE (Internet of Everything) Revolution and 5G+</li> <li>● Promising PHY Research Directions for 5G+ Wireless</li> <li>● The HetHetNets Framework for 5G+ Wireless Networks: Highly Heterogeneous Traffic, Unprecedented Congestion, and Novel Solutions</li> </ul>	Term effective through 31 December 2018
Yu-Dong Yao	<ul style="list-style-type: none"> <li>● Cognitive radio networks</li> <li>● Security issues in cognitive radio networks</li> <li>● Analytical methods in cognitive radio research</li> <li>● Undergraduate and graduate education in electrical and computer engineering</li> </ul>	Term effective through 31 December 2018
Aylin Yener	<ul style="list-style-type: none"> <li>● Wireless Physical Layer Security for the Connected World</li> <li>● Energy Harvesting Wireless Networks: A New Frontier for Communications</li> <li>● Coded Caching for Next Generation Content Delivery</li> </ul>	Term effective through 31 December 2019
Wei Yu	<ul style="list-style-type: none"> <li>● Cloud Radio-Access Networks</li> <li>● Interference Mitigation with Cooperative Relay</li> <li>● Massive MIMO vs. Network MIMO</li> <li>● Interference Alignment for Cellular Networks</li> </ul>	Term effective through 31 December 2016

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## Past Distinguished Lecturers

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Junshan Zhang	<ul style="list-style-type: none"> <li>• Fundamentals of Distributed Opportunistic Scheduling</li> <li>• Networked Communication and Computation for Wind Generation Forecast</li> <li>• Network Interdependence in Cyber-physical Systems</li> </ul>	Term effective through 31 December 2014
Qian Zhang	<ul style="list-style-type: none"> <li>• Advances in Cognitive Radio Networks</li> <li>• Dynamic Spectrum Access for Efficient Spectrum Management</li> <li>• Cooperative Wireless Networks</li> <li>• Cross-Layer Design for Wireless Mesh Networks</li> <li>• Wireless Sensor Networks and Applications</li> </ul>	Term effective through 31 December 2011
Xi Zhang	<ul style="list-style-type: none"> <li>• Statistical QoS Guarantees for Wireless Communications Networks</li> <li>• Cross-Layer Optimization for Cognitive Radio Wireless Networks</li> <li>• Mobile Multicast Communications over Wireless Networks</li> <li>• Multimedia Wireless Sensor Networks</li> <li>• Wideband Communications and QoS Provisionings for Vehicular Networks</li> <li>• Advances in Cooperative Wireless Communications and Relay Networks</li> <li>• Wireless Network Coding</li> </ul>	Term effective through 31 December 2013
Wei Zhang	<ul style="list-style-type: none"> <li>• Interference Coordination in 5G Cellular Networks</li> <li>• Spectrum Sharing in Ultra Dense Networks</li> <li>• Signal Transmission Techniques for Massive MIMO</li> <li>• Energy Harvesting Communications and Networks</li> </ul>	Term effective through 31 December 2017
Weihua Zhuang	<ul style="list-style-type: none"> <li>• Resource Allocation for Cellular/WLAN Integrated Networks</li> <li>• QoS Routing in Mobile Ad Hoc Networks</li> <li>• Distributed Medium Access Control for QoS Support in Wireless Networks</li> <li>• Routing and Medium Access Control for Delay Tolerant Traffic in Mobile Ad Hoc Networks</li> <li>• Hybrid Mobile User Location and Non-Line-of-Sight Error Mitigation</li> </ul>	Term effective through 31 December 2011