IEEE Communications Society

Past Distinguished Lecturers

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Speaker Name	DL Topics	DL Term
Behnaam Aazhang	• Multiuser communication • Multiple access communication • Spectrum Sharing in wireless communication • Cooperative Communication • Scheduling in Wireless Communication • Feedback in Wireless Communication	Term effective through 31 December 2007
Hamid Aghvami	• Delivering Ubiquitous Services Over Heterogeneous Networks (In the Context of End-to-End Networking) • Future Broadband Access Networks-Challenges	Term effective through 31 December 2006
Nazim Agoulmine	• Communication and Bio-Sensors Technologies Integration for Cost-Effective Ubiquitous Healthcare • Energy Efficiency in Mobile Healthcare Systems • Autonomic Fixed and Wireless Networks: Concepts and Implementations	Term effective through 31 December 2014
Rui Luis Aguiar	• An overview of 5G network research • 10 years of Future Internet research: where do we stand? • Reconsidering management challenges in chaotic telecommunication environments • Questioning Quality of Service in telecommunications today	Term effective through 31 December 2018
Salah Aidarous	• New Technologies (3G, IP, WDM) Impact on Network Operations • Evolution to NGOSS and Transition Strategies	Term effective through 31 December 2002
Sonia Aissa	• Cognitive Radio and Dynamic Spectrum Access • Energy Harvesting Communication Networks • Wireless Power Transfer	Term effective through 31 December 2016

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Ozgur Akan	• Fundamentals of Nanoscale Communications • Bio-inspired Communication and Networking • Introduction to Molecular Communications and Nanonetworks • Carbon-nanotube (CNT)-based Nanoscale Ad Hoc and Sensor Networks • Cognitive Radio Sensor Networks • Next-generation Wireless Sensor Networks • Multimedia Communications: Now and Future • Deep Space Communications and InterPlaNetary Internet	Term effective through 31 December 2012
Ian Akyildiz	• Cognitive Radio Networks • Cognitive Ad Hoc Networks • Wireless Multimedia Sensor Networks • Sensor networks in Challenging Environments such as Underwater and Underground • Wireless Mesh Networks • Nano-Networks: A New Communication Paradigm • Wireless Networking in the Next Decade	Term effective through 31 December 2009
George Alexandropoulos	• Reconfigurable intelligent surfaces and smart radio environments. • Metasurfaces antenna arrays and hybrid analog and digital beamforming • Full duplex transceiver architectures and integrated access and backhaul systems • Algorithms and protocols for joint communication, localization, and sensing • Millimeter wave and THz communications in 5G NR and beyond Virtual Lecture Topics • Reconfigurable intelligent surfaces and smart radio environments. • Metasurfaces antenna arrays and hybrid analog and digital beamforming • Full duplex transceiver architectures and integrated access and backhaul systems	Term effective through 31 December 2023

	• Algorithms and protocols for joint communication, localization, and sensing • Millimeter wave and THz communications in 5G NR and beyond	
Wahab Almuhtadi	• DDA and Converged Interconnect Network • Optical Networks Optimization • Optical Networks Protection and Performance Mentoring Virtual Lecture Topics • DDA and Converged Interconnect Network • Optical Networks Optimization • Optical Networks Protection and Performance Mentoring	Term effective through 31 December 2023
Mohamed-Slim Alouini	• Addressing spectrum scarcity through optical wireless communications • Pushing the envelope of wireless sensor networks	Term effective through 31 December 2017
Khaled Amer	• Architecture Analysis and performance modeling of network systems and protocols	Term effective through 31 December 2006
Nirwan Ansari	• Green communications and networking • Edge/Fog computing • Drone-assisted networking • Various aspects of broadband networks	Term effective through 31 December 2020
Huseyin Arslan	• Flexible and cognitive radio access technologies for 5G and beyond • Beyond 5G Radio Access Technologies • 5G and Beyond Waveform Design • Non-orthogonal waveforms, hybrid waveforms, flexible waveforms • Cognitive Radio and Adaptive Wireless Systems • Interference awareness, modeling, avoidance, and cancellation for 5G and beyond • HY and cross-layer security for secure wireless communication • NOMA (non-orthogonal multiple access) • Centralized RAN, Distributed Multi-antenna Systems, and CoMP for 5G and Beyond • Flexible OFDM for 5G and Beyond • Spatial Modulation, Index Modulation and other modulation options for OFDM and beyond	Term effective through 31 December 2021

	• Channel, Interference, and Signal modeling and estimation using sparsity and machine learning • Channel and Interference control Mechanisms (including LIS) Virtual Lecturer Topics • Physical layer security and wireless security • Flexible Radio Access Beyond 5G: A Future Projection • Flexible and • Cognitive Radio Access Technologies for 5G and Beyond	
Koichi Asatani	• NGN (Next Generation Networks) and FN (Future Networks) • VoIP, IP Telephony • Communications QoS & Reliability • Access Networks • Wireless LAN and Broadband Internet • Regulatory Issues of NGN and Internet	Term effective through 31 December 2014
Mohammed Atiquzzaman	• IP-Based Mobility Management of Space Internet of Things • Connected and Autonomous Vehicular Communications Virtual Lecture Topics • Connecting Space Assets to the Internet: Challenges and Solutions • Connected Autonomous Vehicles • Network Mobility in Space and Terrestrial Networks	Term effective through 31 December 2021 Term effective through 31 December 2023
Ender Ayanoglu	• Machine Learning in NextG Networks via Generative Adversarial Networks • Wave-Controlled Metasurface-Based Reconfigurable Intelligent Surfaces • Energy- and Spectral-Efficient Resource Allocation Algorithm for Heterogeneous Networks • Algorithms to Implement Diversity Coding for Near-Hitless Recovery from Link Failures in Communication Networks • Beating the Shannon Limit in Voiceband Modems: The Case of the 56K Modem Virtual Lecture Topics • Machine Learning in NextG Networks via Generative Adversarial Networks	Term effective through 31 December 2023

	• Wave-Controlled Metasurface-Based Reconfigurable Intelligent Surfaces • Energy- and Spectral-Efficient Resource Allocation Algorithm for Heterogeneous Networks • Algorithms to Implement Diversity Coding for Near-Hitless Recovery from Link Failures in Communication Networks • Beating the Shannon Limit in Voiceband Modems: The Case of the 56K Modem	
Victor Bahl	• Wireless Mesh Networks • Wireless Network Management • Enterprise Network Management • Cognitive Wireless Networking & Spectrum Management	Term effective through 31 December 2008
Albert Banchs	• Offloading Cellular Traffic through Opportunistic Communications • Performance Analysis and Optimization of wireless networks • An Overview of 5G mobile networks • Applying control and game theory to wireless networking	Term effective through 31 December 2017
Zeke Bar-Ness	• Peak to average reduction in OFDM-MIMO • Adaptive modulation coding and power allocation for OFDM-MIMO • Effect of phase noise on OFDM and OFDM-MIMO schemes • MIMO Hybrid ARQ for highly frequency selective and time varying channel • Modulation Classification for Emerging Communication Technologies	Term effective through 31 December 2007
Norman C. Beaulieu	• Ultra-Wide Bandwidth (UWB) Receiver Performance Analysis • UWB Receiver Structures for Multiple User Interference • Diversity and Fading Channels • Interference in Wireless Systems • Pulse-Shaping • Wireless Communication Theory • Fading Channel Modeling and Simulation • Importance Sampling and Rejection Sampling Techniques	Term effective through 31 December 2015

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Ali C. Begen	• Multimedia Communications • Networked Entertainment • IPTV Technologies and Content Delivery • Over-the-Top Video and Streaming	Term effective through 31 December 2019
Fawzi Behmann	• Early deployment use cases for 5G • Collaborative IoT from Sensing to Analytics • IoT, 5G, Time Slicing, and AI/ML/DL enable personalization of services • How Will 5G Impact Smart Ecosystems? • 5G/6G Enable Edge Computing and Edge AI • The Future of smart ecosystem empowered by IoT Collaborative Technologies • Covid-19 Accelerate IoT and Collaborative Technologies adoption in Healthcare • Disruptive Technologies Enable Personalization of services • Cognitive Approach To Building a Safe and Smart Communities/Cities • Collaborative IoT, 5G, and AI Empowered Solutions for Healthcare • Developing IoT Solutions for Smart Homes/Buildings, Smart Car and Smart Energy • Developing IoT Solutions for Mobility and Public Safety • Cognitive analytics - road to personalized services • Autonomous Vehicles/Drone and security • IOT and machine-to-machine learning • Is there a common vision for IoT, 5G and Virtualization by 2020? • Sample use cases of wearables, IoT, drone, virtualization/time slicing, blockchain Virtual Lecture Topics • 5G/6G Enable Edge Computing and Edge AI • The Future of smart ecosystem empowered by IoT Collaborative Technologies • Covid-19 Accelerate IoT and Collaborative Technologies adoption in Healthcare • Disruptive Technologies Enable Personalization of services • Cognitive Approach to Building a Safe and Smart Cities/Societies	Term effective through 31 December 2021 Term effective through 31 December 2023

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Past Distinguished Lecturers

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Jalel Ben-Othman	• Wireless Communication and Mobile Networking • Sensor Networks • VANETS • Wireless, Mobile Ad hoc and Mesh Networks • QoS in Heterogeneous Wired and Wireless Networks • Security: Ad hoc, Sensor and ubiquitous Networks • Performance Evaluation: Markovian Process, SAN, Queuing Networks • Cloud Computing	Term effective through 31 December 2018
Randall Berry	• Spectrum Sharing Economics • Interference Games • Market design and dynamic spectrum sharing	Term effective through 31 December 2015
Vijay K. Bhargava	• Green Cellular Networks: A Survey, Some Research Issues and Challenges • Multigigabit Wireless Multimedia Communications: Future and Core Technologies • Information Security and its Impact on Society • From Marconi to Wireless Internet: A Communications Perspective	Term effective through 31 December 2010
Kaigui Bian	• AI-enabled edge computing • Mobile networks • Internet of Things (IoT) • Dynamic spectrum access networks Virtual Lecture Topics • AI-enabled edge computing • Internet of Things (IoT) • Mobile networks	Term effective through 31 December 2021
Ezio Biglieri	• Coding for Fading Channels • Multiple Transmit and Receive Antennas: Capacity Limits, Space-Time Codes, and Signal Processing • Turbo Algorithms for Decoding, Equalization, and Detection: A Graphical Approach	Term effective through 31 December 2006

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Past Distinguished Lecturers

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Benny Bing	• Emerging Technologies of Wireless LANs: Theory, Design, and Deployment • Next Generation Broadband Wireless Access • Broadband Cable and Fiber Access • Software Defined Radio and Cognitive Radio Networks • Multiple Access Communications	Term effective through 31 December 2008
Aggelos Bletsas	• Converting your Ethernet Network to a Distributed, Indoor RFID Reader with Commodity SDRs and Intelligent, Real-Time Noncoherent Sequence Detection • Intelligently Wireless Batteryless RF-Powered Reconfigurable Surface: Theory, Implementation & Limitations • Robust RFID Localization in Multipath with a Moving Robot • Towards Ambiently-Powered, Batteryless, Internet-of-Things-That-Think with Asynchronous Principles • Recycling Radio Waves for the Wide Adoption of Precision Agriculture Virtual Lecture Topics • Converting your Ethernet Network to a Distributed, Indoor RFID Reader with Commodity SDRs and Intelligent, Real-Time Noncoherent Sequence Detection • Intelligently Wireless Batteryless RF-Powered Reconfigurable Surface: Theory, Implementation & Limitations • Robust RFID Localization in Multipath with a Moving Robot • Towards Ambiently-Powered, Batteryless, Internet-of-Things-That-Think with Asynchronous Principles • Recycling Radio Waves for the Wide Adoption of Precision Agriculture	Term effective through 31 December 2023
Azzedine Boukerche		Term effective through 31 December 2012

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Raouf Boutaba	• Autonomic Computing and Communications	Term effective through 31 December 2009
Stefano Bregni	• Synchronization of Digital Telecommunications Networks	Term effective through 31 December 2008
Stephen Bush	• Nanoscale Communication Networks • Smart Grid: Communication-Enabled Intelligence for the Electric Power Grid	Term effective through 31 December 2012
Majid Butt	• Federated Learning: Are Wireless Networks Ready for it? • Reduced Capability UEs and Passive IoTs: A missing link in 5G landscape • Machine Learning: Standardization roadmap for 6G • AI in 6G Networks: Path from Enabler to AI-Native Air Interface • Semantic Communication in future networks Virtual Lecture Topics • Federated Learning: Are Wireless Networks Ready for it? • Reduced Capability UEs and Passive IoTs: A missing link in 5G landscape • Machine Learning: Standardization roadmap for 6G • AI in 6G Networks: Path from Enabler to AI-Native Air Interface • Semantic Communication in future networks	Term effective through 31 December 2023
Danijela Cabric	• Physical Layer MIMO Millimeter-wave Communications • Ultra-Dense Millimeter-wave Cellular Networks: Beam Discovery, Association, and Handover • Machine Learning for Cognitive Radios • Advances in Spectrum Sensing and Signal Classification • Massive MIMO and Interference Management in Spectrum Sharing networks • Energy-efficient Massive IoT Communications over Shared Spectrum	Term effective through 31 December 2019

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Angela Sara Cacciapuoti	• The rise of the Quantum Internet: From No-Cloning to Teleportation • How Deep the Theory of Quantum Communications Goes • Quantum Internet: from classical to quantum paths Virtual Lecture Topics • The rise of the Quantum Internet: From No-Cloning to Teleportation • How Deep the Theory of Quantum Communications Goes • Quantum Internet: from classical to quantum paths	Term effective through 31 December 2023
Lin Cai	• New protocol architecture for 6G • Vehicle-to-Everything (V2X) Protocol Design for Intelligent Transportation • Directed percolation routing: Unlock multi-path diversity for ultra-reliable and low latency services Virtual Lecture Topics • New protocol architecture for 6G • Vehicle-to-Everything (V2X) Protocol Design for Intelligent Transportation • Directed percolation routing: Unlock multi-path diversity for ultra-reliable and low latency services	Term effective through 31 December 2023
Xiaojun (Matt) Cao	• Network Virtualization, SDN, NFV • Elastic/flex-grid Optical Networks • Network Survivability • Intelligent Sensing and Applications in Secure Cyber Systems Virtual Lecture Topics • Applications and Challenges in Network Virtualization • Service Function Deployment for Future Internet • Intelligent and Secure Cloud Systems	Term effective through 31 December 2021
Chan-Byoung Chae	• Macro/nano-scale molecular communications • mmWave/sub-THz: metasurface, RF architecture, and transmission strategies • Full/flexible duplex radios • VR/haptic wireless communications • Deep learning for wireless communications Virtual Lecture Topics	Term effective through 31 December 2021

	• Macro/nano-scale molecular communications • mmWave/sub-THz: metasurface, RF architecture, and transmission strategies • Full/flexible duplex radios	Term effective through 31 December 2023
Anthony Chan	• 5G and Future Wireless Internet: Changes and Challenges • Software Defined Network and Network Function Virtualization for Wireless Networks • Distributed Mobility for Future Mobile Internet • Role of Communication and Networking in Developing Countries and Digital Divide	Term effective through 31 December 2016
Rajarathnam Chandramouli	• Dynamic Spectrum Access Wireless Networking • Big Data Problems in Social Network Modeling and Analytics	Term effective through 31 December 2014
Hongyang Chen	• IoT • 5G and B5G technologies • Edge/Fog computing • URLLC • D2D communications • V2X Virtual Lecture Topics • Technologies for 5G and B5G • Vehicular communications • Wireless Localization • Vehicular trajectory analysis and mining • Internet of Things and Machine-to-Machine Communication • Ultra-Reliable and Low Latency Communications (URLLC)	Term effective through 31 December 2022
Hsiao-Hwa Chen	• Complementary Coded Code Hopping Multiple Access - A NOMA Scheme; • Resource Allocation for PHY-Layer Security in Cellular Underlay V2V Communications.	Term effective through 31 December 2021
Wai Chen	• Advances in Vehicle Information Networking	Term effective through 31 December 2006

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Wen Chen	• Random massive access • Coded cooperation • Green heterogeneous networks • Vehicular communications	Term effective through 31 December 2020
Shigang Chen	• Virtual Sketches and Space Sharing: A Tool Box for Big Data • Compact and Fast Network Measurement Methods • Infrastructural RFID Systems and Their Impact on Internet of Things	Term effective through 31 December 2017
Tee Hiang Cheng	• All-Optical Photonic Packet Switching: What Have Changed and What Have Not Changed After 20 Years? • Optical Access Networks: Past, Present and Future • Doppler Effect and Its Engineering Applications	Term effective through 31 December 2012
Yu Cheng	• Optimizing wireless networks in a uniformed multi-dimensional resource framework • Real-time intrusion detection for multimedia application over wireless networks • Towards a secure and efficient vehicular ad hoc network	Term effective through 31 December 2017
Soumaya Cherkaoui	• AI-enabled edge computing • Edge/Fog computing • Network virtualization, SDN, NFV • Vehicular communications • Technologies for 5G and beyond wireless networks • Internet of Things (IoT)	Term effective through 31 December 2021 Term effective through 31 December 2023
Giovanni Cherubini	• Data transmission techniques for storage applications • Filter-bank modulation techniques for transmission over frequency-selective channels	Term effective through 31 December 2007
Nim Cheung	• Technology and Architecture Trends in Optical Networking • The Role of Optical Interconnect in Supercomputing	Term effective through 31 December 2008

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Mung Chiang	• Teaching Networking via 20 Questions	Term effective through 31 December 2013
Marco Chiani	• Fundamentals and Advances in MIMO Communication Systems and Networks • Application of random matrices theory to communications and signal processing • Spectrum Sensing for Cognitive Radio: fundamental limits and multiple antenna based methods • Codes on Graphs for Throughput Enhancement, Packet Loss Correction and Multiple Access	Term effective through 31 December 2012
George Chrisikos		Term effective through 31 December 2015
Bruno Clerckx	• Rate-Splitting Multiple Access for 6G • Flexible and Robust Interference Management • Multi-Antenna/MIMO Technologies for 6G • Multi-Antenna Non-Orthogonal Multiple Access: Misunderstandings and Misconceptions • Multi-Antenna Processing for Satellite Communications • Communication and Signal Designs for Wireless Power Transfer • Prototyping and Experimentation of Wireless Power Transfer • Wireless Information and Power Transfer • Signal Processing and Machine Learning Techniques for Wireless Powered Networks • Integrated Sensing and Communications • Intelligent Reflecting Surfaces Virtual Lecture Topics • Rate-Splitting Multiple Access for 6G • Flexible and Robust Interference Management • Multi-Antenna/MIMO Technologies for 6G • Multi-Antenna Non-Orthogonal Multiple Access: Misunderstandings and Misconceptions • Multi-Antenna Processing for Satellite Communications	Term effective through 31 December 2022

	• Communication and Signal Designs for Wireless Power Transfer • Prototyping and Experimentation of Wireless Power Transfer • Wireless Information and Power Transfer • Signal Processing and Machine Learning Techniques for Wireless Powered Networks • Integrated Sensing and Communications • Intelligent Reflecting Surfaces	
Sinem Coleri	• AI based Machine-to-Machine Communications in 6G • AI Based Ultra-Reliable Wireless Networked Control Systems in 6G • AI Based Heterogeneous Vehicular Networks in 6G • AI Based Zero Energy Communication in 6G Virtual Lecture Topics • AI based Machine-to-Machine Communications in 6G • AI Based Ultra-Reliable Wireless Networked Control Systems in 6G • AI Based Heterogeneous Vehicular Networks in 6G • AI Based Zero Energy Communication in 6G	Term effective through 31 December 2023
J.R. Cruz	• The Role of Communications Signal Processing in Storage • Systems Signal Processing and Coding for Perpendicular Magnetic Recording • Advanced Channel Detection and Iterative Decoding for Hard Disk Drives	Term effective through 31 December 2010
Shuguang Cui	• An integrated approach to big data analytics and networking • Renewable energy powered communication system design • Big data aware next-generation cellular design	Term effective through 31 December 2016
Claudio da Silva	• Wi-Fi Sensing: Fundamentals, Applications, and Standard • Millimeter-wave Wi-Fi: Communications, Ranging, and Sensing • IEEE 802.11: A Look Under the Hood	Term effective through 31 December 2023

	Virtual Lecture Topics ● Wi-Fi Sensing: Fundamentals, Applications, and Standard ● Millimeter-wave Wi-Fi: Communications, Ranging, and Sensing ● IEEE 802.11: A Look Under the Hood	
Mahmoud Daneshmand	● Big Data & Data Science Technologies: Machine Learning (ML), Artificial Intelligences (AI), Deep Learning (DL), with applications: ● (AI) Driven Networks: Challenges and Solutions ● AI Roadmap for 5G: eHealth ● Intelligent Network Operations and Management ● AI/ML for Future Networks ● AI-Driven Networking: Bandwidth Impacts on Cloud Networks ● Internet of Things and Stream Data Analytics ● AI and ML for FinTech ● Big Data, Internet of Things, Cybersecurity, Streams Analytics & Knowledge Discovery Virtual Lecture Topics: ● Big Data & Data Science Technologies: Machine Learning (ML), Artificial Intelligences (AI), Deep Learning (DL), with applications: ● (AI) Driven Networks: Challenges and Solutions ● AI Roadmap for 5G: eHealth ● Intelligent Network Operations and Management ● AI/ML for Future Networks ● AI-Driven Networking: Bandwidth Impacts on Cloud Networks ● Internet of Things and Stream Data Analytics ● AI and ML for FinTech ● Big Data, Internet of Things, Cybersecurity, Streams Analytics & Knowledge Discovery	Term effective through 31 December 2022
Davide Dardari	● Indoor localization and tracking: from theoretical foundations to practical applications	Term effective through 31 December 2019

	• Backscatter-based communication and localization: the future of battery-less radio identification and positioning in IoT networks • Massive antenna arrays at mmWave: opportunities in localization and mapping • Joint localization and navigation in UAV networks • Crowd-based estimation in wireless sensor networks	
Luiz DaSilva	• Game theory and wireless networks • Cognitive networks • Recent advances in dynamic spectrum access • Network sharing and the virtualisation of the wireless access	Term effective through 31 December 2018
Uday B. Desai	• Wireless Sensor Networks: AgriSens and SenSlide • Self Organizing Networks: Multihop Routing and Access Mechanism • Multi- hop Cellular Networks • ICT for Socioeconomic Development • Cell Phone Based Wireless Sensor Networks: Layered Routing	Term effective through 31 December 2009
Celia Desmond	• Trends in the Telecommunications Industry • Project Management for Telecommunications Managers • Coaching for Managers • Communications Course – Making Yourself Heard	Term effective through 31 December 2008
Michael Devetsikiotis	• Challenges in Service Oriented and Application Aware Networking • Modeling and Simulation Techniques for Communication Networks • Towards Network Enabled Collaboration and Innovation • Formal Methods for Cross Layer Quantitative Modeling of Networks • Adaptivity Mechanisms in Next Generation Networks • Pricing and Optimization of Service Oriented Next Generation Networks • Traffic Characterization and Analysis for Next Generation Networks	Term effective through 31 December 2011

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Marco Di Renzo	• Spatial modulation for MIMO wireless systems • System-level analysis and optimization: The magic of stochastic geometry • Ultra-dense heterogeneous cellular networks • Wireless powered communications and energy harvesting: Towards energy-neutral networks	Term effective through 31 December 2020
Zhi Ding	• Hybrid ARQ and Retransmission Diversity Optimization in Wireless Communications • Approaches to Wireless MIMO Channel Feedback • Cognitive Wireless Networks • Optimum Transmitter Precoding in Hybrid ARQ for Wireless MIMO Communications • Fast Wireless Source Localization and Sensor Placement • Quadratic Programming in Blind Equalization	Term effective through 31 December 2009
Zhiguo Ding	• Multiple access techniques for 5G and B5G systems • Green communications • MIMO and cooperative networks Virtual Lecture Topics: • Multiple access techniques for 5G and B5G systems • Green communications • MIMO and cooperative networks	Term effective through 31 December 2022
Sudhir Dixit	• Technologies for 5G • SDN, OpenFlow and Virtualization • Cloud and Crowd Computing (Human Augmented Cloud Computing) • Network Protocols and Next Generation Networks • Multi-sensory Human Bond Communication • Internet of Things and Machine-to-Machine Communication	Term effective through 31 December 2021 Term effective through 31 December 2023
Octavia Dobre	• Technologies for 5G and beyond wireless networks • Non-orthogonal multiple access for massive machine-type communications • Automatic signal identification: Classical approaches and new trends • Signal processing for coherent optical communications	Term effective through 31 December 2020

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Mischa Dohler	• Machine-to-Machine: Technologies, Standards and Applications • ICT Technologies in Smart Cities and Smart Grids • Femtocells: Technologies, Standards and Applications • Cognitive and Docitive Networks • Design Principles Towards 5G High-Capacity System • The Tactile Internet - The Next Tech Frontier? • Is 5G Going To Power The IoT? • Research, Innovation & Entrepreneurship in a 21st Century Ecosystem	Term effective through 31 December 2015
Klaus Dostert	• Possibilities and Limitations of Broadband over Power Lines (BPL) or Power Line Communication (PLC) • Channel Models for the Electrical Power Distribution Grid as a Communication Medium (Simulation & Emulation) • Aspects of BPL or PLC Modem Design, Based on Multi-Carrier Signaling • Analysis and Solutions for EMC Issues with BPL or PLC	Term effective through 31 December 2008
Falko Dressler	• Inter-Vehicular Communication: Protocols and Simulation Techniques • Self-Organization in Sensor and Actor Networks • Biologically-inspired and Nano-scale Communication and Networking	Term effective through 31 December 2012
Ashutosh Dutta	• Security for SDN/NFV and Virtualized Networks • 5G Security • Cloud Security • Mobility Protocols and Handover Optimization • Next Generation Mobility Networks	Term effective through 31 December 2020
Tarek S. El-Bawab	• Telecommunication Engineering Education (TEE) • Broadband Access • Telecommunication Standards	Term effective through 31 December 2019

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Jaafar Elmirghani	• Energy efficient core networks • Green content distribution networks • Network and data centre virtualization • Data centre disaggregation • Optical networks in data centres • Energy efficient core networks • Renewable energy in core and data centre networks • Energy efficient Peer-to-Peer and IPTV networks • Visible light communications • Optical wireless communication systems • Multigigabit indoor optical wireless multi-user and cooperative systems	Term effective through 31 December 2016
Tony Ephremides	• Wireless Ad Hoc Networks • Network Coding As A New Paradigm In Networking • Energy Efficiency In Wireless Networks • Cross-Layer Issues In Network Design • Sensor Networks • Stability Issues In Wireless Networks • Power Control In Ad Hoc Networks • New Directions And Challenges In Wireless Networking	Term effective through 31 December 2009
Javan Erfanian	• End-to-end Wireless Technology Evolution • New Paradigms and Future Service Environment • Emerging User Requirements & Key Research Areas	Term effective through 31 December 2008
Melike Erol-Kantarci	• AI-enabled Wireless Networks • Deep and Reinforcement Learning in 5G and 6G • Distributed Machine Learning for Open Radio Access Network (ORAN) • AI-enabled Closed-loop RAN automation • Transfer Reinforcement Learning in Multi-RAT Environments • Distributed Learning in Multi-access Edge Computing (MEC) • Energy Trading in Transactive Energy Systems and Microgrids	Term effective through 31 December 2022

	• Recent advances in Smart Grid Communications Virtual Lecture Topics: • AI-enabled Wireless Networks • Distributed Machine Learning for Open RAN (ORAN) • Connected Autonomous Electric Vehicles (CAEV) and Smart City Integration • Energy Trading in Transactive Energy Systems and Microgrids • Ultra-reliable and Low-latency Communications for the Smart Grid	
Yuguang Michael Fang	• A few selected research issues in wireless networks • Cross-layer design for wireless networks • Securing resource-constrained wireless networks • Small world phenomena in wireless ad hoc networks • Secure network connectivity and capacity • Privacy and security for mobile healthcare systems • Wireless medium access control protocols	Term effective through 31 December 2015
Xavier Fernando	• Radio over Fiber Systems • Communication Requirements for the Smart Grid • Wireless Sensor Networks for Smart, Green Buildings • Wireless Communications for the Aerospace Industry • Low Interference Wireless Communications for Biomedical Application • Underground Communication Systems for Saving Miners Life	Term effective through 31 December 2013
Nelson Fonseca	• Networking for Big Data • Cloud Networking	Term effective through 31 December 2018
Xiaoming Fu	• Content Distribution: From Client/Server to Content-Oriented Publish/Subscribe System • Scaling Microblogging Services with Divergent Traffic Demands • Network Friendly TCP for Background Delay-Insensitive Applications	Term effective through 31 December 2015

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Feifei Gao	• Deep Learning for Physical Layer Communications: An Attempt Towards 6G • An Angle Domain Perspective for Designing Extremely Large MIMO System Virtual Lecture Topics • Deep Learning for Physical Layer Communications: An Attempt Towards 6G • An Angle Domain Perspective for Designing Extremely Large MIMO System	Term effective through 31 December 2022
Jacob Gavan	• Radio Frequency Systems Interference and Radiation Effects: Analysis, Computation and Mitigation Techniques • Radio Systems Collocation Non Linear Mutual Interference Effects: Analysis, Computation and Mitigation Techniques • Electromagnetic Analysis and Simulation of RF base stations and Headsets Radiation Effects and Development of Mitigation Techniques • RADAR and LADAR multimode systems for detection and tracking cooperative targets with optimum accuracy and operation ranges • Stratospheric Quasi Stationary Platforms (SQSP) as complement to Ground Cellular Systems for Improving Radio-Communication Performances • Hypothesis of Hornets (or other Flying Creatures) Biological RADAR and Direction Finding Systems and Future Applications • Overview of Navigation Techniques Leading to Global Positioning Systems with Optimum Reliability and Accuracy • Overview of Mobile Satellite Systems • Overview of Smart Antennas • Radio Frequency Identification Devices (RFID) EMC performances: Analysis and Mitigation Techniques	Term effective through 31 December 2009

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Erol Gelenbe	• Smart Networks at the Edge • Networks for Emergency Management • Cognitive Packet Networks • Bio-Inspired Networks • Auction Systems and E-Commerce • Product Form Networks – Discovery or Invention? • Search in Infinite Unknown Environments	Term effective through 31 December 2014
Alex Gelman	• Standardization Activities in IEEE - A Service to the Membership, Industry, and Humanity	Term effective through 31 December 2012
Giovanni Geraci	• What's the Story with UAV Cellular Communications? • IEEE 802.11be: Wi-Fi Strikes Again Virtual Lecture Topics: • What's the Story with UAV Cellular Communications? • IEEE 802.11be: Wi-Fi Strikes Again	Term effective through 31 December 2022
Hamid Gharavi	• Wireless Multimedia Communications • Ad-hoc Networks Systems & Applications	Term effective through 31 December 2006
Giovanni Giambene	• Advanced Satellite Networking • IoT via 5G Satellite Systems • QoS for the Internet • UAV-HAP-megaLEO-GEO, the 3D Aerial Component for 5G and Beyond Systems • Queuing Theory: Models Applied to Telecommunication Problems • Multipath Transport Protocols • 5G and Vehicular Communications (V2X) Virtual Lecture Topics: • Advanced Satellite Networking • IoT via 5G Satellite Systems • QoS for the Internet • UAV-HAP-megaLEO-GEO, the 3D Aerial Component for 5G and Beyond Systems	Term effective through 31 December 2022

	• Queuing Theory: Models Applied to Telecommunication Problems • Multipath Transport Protocols • 5G and Vehicular Communications (V2X)	
Jerry Gibson	• Voice and Video over Wireless Local Area Networks • Voice Capacity under Quality Constraints for IEEE 802.11a Wireless LANs • Multiple Descriptions and Path Diversity for Voice Communications over Wireless Mesh Networks	Term effective through 31 December 2006
Roch Glitho	• Next Generation Networks • IP Telephony • Architectures for End User Services • Network Interworking	Term effective through 31 December 2009
Andrea Goldsmith	• Capacity Limits of Wireless Channels/Networks • Multiple-Antennas in Wireless Links/Networks • Space-Time-Frequency Agile Radios • Energy-Constrained Communication • Cross Layer Design of Wireless Systems • Wireless Ad Hoc and Sensor Network Design • Multimedia over Wireless • Distributed Control over Wireless Networks	Term effective through 31 December 2010
Fabrizio Granelli	• Green wireless networking: energy efficiency in wireless networks • Cognitive and adaptive networking: self-management at the service of network evolution • Networking and the Smart Grid: the relevance of communications in the future of power grid • Design of green networks: towards the Green Internet • Network Function Virtualization in Aerial Communications • SDN & NFV in future communication networks • Automating network management in 5G and beyond mobile networks • Integrating UAVs in 6G mobile networks • Computing in Communication Networks • Cognition and Network Automation	Term effective through 31 December 2015 Term effective through 31 December 2022

	• Communications infrastructure at the time of pandemics Virtual Lecture Topics • Network Function Virtualization in Aerial Communications • SDN & NFV in future communication networks • Automating network management in 5G and beyond mobile networks • Integrating UAVs in 6G mobile networks • Computing in Communication Networks • Cognition and Network Automation • Communications infrastructure at the time of pandemics	
Mohsen Guizani	• Lightweight Security Schemes • Blockchain for Healthcare • Wireless Communications Virtual Lecture Topics • Lightweight Security Schemes • Blockchain for Healthcare • Wireless Communications	Term effective through 31 December 2020
Song Guo	• Cross-Cloud Resource Management for Big Data • Traffic-aware Geo-distributed Big Data Analytics with Predictable Performance • Robust Incentive Mechanisms for Cognitive Radio Networks • Device-to-Device Communication in Cellular Networks	Term effective through 31 December 2017
Andrei Gurtov	• Software Defined Mobile Networks: Beyond LTE Network Architecture • Introduction to Host Identity Protocol and Its Practical Applications • Security and Smartness for Medical Sensor Networks*Design and Implementation of Secure Distributed Systems and Networks • Fair bandwidth allocation in datacenters	Term effective through 31 December 2019

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Zygmunt J. Haas	• Ad Hoc Networking Technology: from Research to Applications • Scalability of Wireless Networks • Security in Wireless Networks • Biologically-Inspired Networks and Systems • Sensor Networks	Term effective through 31 December 2007
Ibrahim Habib	• GMPLS Control of IP optical Networks • Architecture Design of Metro Optical Networks • Traffic Engineering and QoS in Next Generation Networks • Wireless Local and Metro Area Networks • 3G and Beyond Networks	Term effective through 31 December 2007
Bechir Hamdaoui	• Cognitive radio and dynamic spectrum access networking • Green data centers • Cloud computing resource management • Network virtualization and cloud of things • Heterogeneous networks	Term effective through 31 December 2017
Walaa Hamouda	• Toward future generations of wireless communications • IoT and Machine-to-Machine communications Virtual Lecture Topics • Toward future generations of wireless communications • IoT and Machine-to-Machine communications	Term effective through 31 December 2022
Zhu Han	• Big Data In Smart Grid • Resource Management for Device-to-Device Communications • Physical Layer Security: A Network Optimization Point of View • Resource Allocation for Full-Duplex Communication and Networks • Smart Grid Communications and Networking • Game Theory for Wireless Networks • Contract Theory for Wireless Networks • Matching Theory for Wireless Networks • Compressive Sensing and its Application • RF Energy Harvesting Networks	Term effective through 31 December 2018

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Lajos Hanzo	• Wireless Multimedia Turbo-transceivers • Wireless Video Communications • Joint Source- and Channel Coding • Near-Instantaneously Adaptive Wireless Single-Carrier, OFDM and CDMA Systems • Turbo Coding, Turbo Equalisation and Space-Time Coding • Standard-Oriented, Channel-Quality Motivated, Service-Related and Algorithmic Aspects of Software-Controlled Radios • Research in Single- and Multi-Carrier CDMA • Research aspects of OFDM • Cross-layer optimization in Wireless Communications • Genetic Algorithms in Wireless Communications • Smart Antennas in Wireless Communications • Advanced Wireless Networking	Term effective through 31 December 2007
Fred Harris	• Synchronizing Digital Receivers • DSP to Improve Receiver Performance(I-Q Mismatch, DC-Cancel, etc) • DSP in Modern Digital Communications • OFDM from A DSP Perspective • Software Defined Radio • Channelized Receivers • A Short History of Radio	Term effective through 31 December 2009
Kafi Hassan	• System and Channel models for frequencies from 0.5 to 100 GHz • 3D data and 3D simulation modeling concepts • Massive MIMO, 3D beamforming and spatial multiplexing • Fundamentals of Intrusion detection system (IDS) Virtual Lecture Topics • System and Channel models for frequencies from 0.5 to 100 GHz • 3D data and 3D simulation modeling concepts • Massive MIMO, 3D beamforming and spatial multiplexing • Fundamentals of Intrusion detection system (IDS)	Term effective through 31 December 2023

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Mahbub Hassan	• Vehicular Communications and Networking • Content Streaming for Mobile Devices • Nano-scale Communications and Networking	Term effective through 31 December 2016
Hossam Hassanein	• Enabling Ubiquitous Mobile Services • Next Generation Broadband Wireless Access Networks • Resource Management in Heterogeneous Wireless Networks • Enabling Mobile Computing in Wireless Ad hoc Networks • Planning and Device Deployment in Wireless Sensor Networks	Term effective through 31 December 2010
Y.W. Peter Hong	• Learning from Decentralized Datasets – Optimization and Communication Aspects • UAV Communications for Data-Gathering in Wireless Sensor Networks • Artificial Intelligence in Wireless Communications • Distributed Estimation in Energy Harvesting Wireless Sensor Networks – Sensor Deployment and Wireless Charging Problems • Secret Communications in the Physical Layer – Impact of Training and Limited Channel State Information Virtual Lecture Topics • Learning from Decentralized Datasets – Optimization and Communication Aspects • UAV Communications for Data-Gathering in Wireless Sensor Networks • Artificial Intelligence in Wireless Communications • Distributed Estimation in Energy Harvesting Wireless Sensor Networks – Sensor Deployment and Wireless Charging Problems • Secret Communications in the Physical Layer – Impact of Training and Limited Channel State Information	Term effective through 31 December 2023

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Ekram Hossain	• Mobile Edge Computing (MEC): Computation Offloading and Activation of MEC Servers • Machine Learning for Wireless Networks: Basics, Applications, and Trends • Stochastic Geometry Modeling and Analysis of Wireless Networks • Massive Wireless Connectivity and Non-Orthogonal Multiple Access (NOMA) • Game Theory for Wireless Networks • Dynamic Spectrum Access in Cognitive Radio Networks • Energy Harvesting in Wireless Networks and and Self-Sustainability	Term effective through 31 December 2020
M. Shamim Hossain	• Explainable AI for digital health • B5G-based healthcare Vertical • Advanced deep learning techniques for healthcare Virtual Lecture Topics • AI-IoT for healthcare • Meta learning for connected health • Edge-learning for healthcare	Term effective through 31 December 2022
Tom Hou	• Advances on Interference Management in Wireless Networks • MIMO in Multi-hop Wireless Networks • New Spectrum Sharing and Cooperation Paradigms for Cognitive Radio Networks • Wireless Ad Hoc and Sensor Networks for Cyber Physical Systems • Wireless Energy Transfer for Wireless Sensor Networks • Applied Optimization Methods for Wireless Networks	Term effective through 31 December 2018
Rose Qingyang Hu	• Design and performance of 5G wireless communications and Networks • Spectral efficient and energy efficient wireless network design and tradeoff • Device to Device communications underlay cellular networks	Term effective through 31 December 2018
Dijiang Huang	• Software Defined Networking and Security • Moving Target Defense • Intelligent Internet Edge (Networking, Computing, and Security)	Term effective through 31 December 2020

	• Distributed Access Control and Privacy Protection in Blockchain • Attribute-Based Access Control	
Jianwei Huang	• Incentive Mechanisms for User-Provided Networks • Mobile Data Offloading • Graphical Congestion Games • Cognitive Virtual Network Operator Games • Economics of Cooperative Spectrum Sharing • Economics of TV White Space	Term effective through 31 December 2018
Kaibin Huang	• Mobile edge computing for 5G-and-beyond • Edge machine learning in next-generation communication • Wireless power transfer in next-generation networks • Wireless networks with energy harvesting • Effective wireless data aggregation for Internet-of-Things Virtual Lecture Topics • Mobile edge computing for 5G-and-beyond • Edge machine learning in next-generation communication • Wireless power transfer in next-generation networks	Term effective through 31 December 2022
Longbo Huang	• Efficient and Robust Deep Reinforcement Learning • Learning and Network Control • Online Learning and Optimization Virtual Lecture Topics • Efficient and Robust Deep Reinforcement Learning • Learning and Network Control • Online Learning and Optimization	Term effective through 31 December 2023
Heather E. Hudson	• From Rural Village to Global Village: The Role of Telecommunications in Socio-Economic Development • Bridging the Broadband Divide: Strategies for Rural and Developing Regions • Universal Service Funds: Accelerators or Anachronisms? • Broadband Policies and Funding Strategies in North America (Canada and U.S.) • Rethinking Remoteness: VOIP, YouTube, and Development • Rural Telemedicine: Lessons from Alaska • Municipal Broadband: Lessons from the U.S. Experience • The Wireless Explosion: Connectivity for the Developing World	Term effective through 31 December 2011

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Past Distinguished Lecturers

Last updated 3/28/2023

Syed Jafar	• Interference Alignment • Index Coding	Term effective through 31 December 2014
Hamid Jafarkhani	• Distributed Beamforming in Wireless Relay-Interference Networks • Cooperative Communications • Limited Feedback Beamforming in MIMO • Distributed Space-Time Coding	Term effective through 31 December 2015
Raj Jain	• Computer Networking: Recent Developments, Trends, and Issues	Term effective through 31 December 2006
Andrzej Jajszczyk	• Next-Generation Networking Solutions & Challenges • Towards Automatically Switched Optical Networks (ASON)	Term effective through 31 December 2005
Gabriel Jakobson	• Introduction to Situation Management of Complex Networks and Systems Operations • Introduction to Cognitive Situation Management of Tactical Operations • Cyber Security Situation Awareness and Impact Assessment: Issues, Models and Applications • New Directions in Cyber Security: Achieving Cyber Attack Tolerant Missions and Business Processes	Term effective through 31 December 2013
Gabe Jakobson	• The Principles of Dynamic Event and Situation Management • Introduction to Cognitive Information Fusion and Operational Situation Management • Introduction to Event Correlation Models, Solutions and Applications • Real-Time Network Fault and Alarm Management • Management of Dynamic Networks and Services Based on Distributed Event Correlation • The Technology and Practice of Integrated Multi-Agent Event Correlation Systems	Term effective through 31 December 2009

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Abbas Jamalipour	• Broadband Wireless IP • Next Generation Mobile Network Architectures • Heterogeneous Mobile Cellular Networks	Term effective through 31 December 2009
Tara Javidi	• Active Learning and CSI acquisition for mmWave Initial Alignment and Cognitive Radio • Learning and Optimization for Next Generation Communication Networks • Information Acquisition, Controlled Sensing, and Active Learning • Social and Federated Learning	Term effective through 31 December 2020
Anura Jayasumana	• Internet of Things: A pervasive Technology for Innovation • Network Aware Nodes: A Novel Self-Organization Approach for Internet of Things • Topology Coordinate Systems - A Localization Free Approach for Self-Organization of Large-Scale 2D and 3D Sensor Networks • On Modeling and Measurement of Networks and Network-based Information • Detection of Anomalies and Weak Distributed Patterns in Networks • Peer-to-Peer Networks: File Sharing to Collaborative Computing	Term effective through 31 December 2017
Josep Miquel Jornet	• Conquering the Terahertz Band for 6G Systems: From Theory to Practice • Nanonetworking in the Terahertz Band (and Beyond): From Nanomaterials to Macrosystems • Wireless Nano-Bio Communication Networks enabled by Optogenomic Interfaces Virtual Lecture Topics • Conquering the Terahertz Band for 6G Systems: From Theory to Practice • Nanonetworking in the Terahertz Band (and Beyond): From Nanomaterials to Macrosystems • Wireless Nano-Bio Communication Networks enabled by Optogenomic Interfaces	Term effective through 31 December 2023

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Admela Jukan	• Design and Performance of Ethernet-over-Optical Network Systems • A Network Management Perspective on Internet-optical Service Convergence • Theory and Practice of Network Technology Migration to Software Defined Networking	Term effective through 31 December 2016
Ahmed Kamal	• Multicasting in Cognitive Radio Networks	Term effective through 31 December 2014
George K. Karagiannidis	• Optical Wireless Communications • Non-orthogonal Multiple Access • Communications in the THz band • Low Power Wide Area Networks	Term effective through 31 December 2019
Stamatios Kartalopoulos	• DWDM Technology and Optical Networks for Beginners • DWDM Optical Networks • DWDM Technology • Next-Generation Intelligent Optical Networks • Mesh Free-Space (or Wireless) Optical Networks • Introduction to Network Security • Introduction to Quantum Cryptography • Neural Networks and Fuzzy Logic	Term effective through 31 December 2010
Nei Kato	• Ad Hoc & Mesh & Sensor Networks: Recent Trends and Future directions • D2D: Research Trends and Future Perspective	Term effective through 31 December 2016
Mohsen Kavehrad	• Multi-Input Multi-Output (MIMO); Potential Applications – Myth and Reality • Multi-band, Multi-service, Sensing Metamaterials; Myth & Reality • Optical Wireless Applications - A Solution to Ease the Wireless Airwaves Spectrum Crunch • Optical Wireless: Theory and Applications • Reconfigurable Optical Wireless Applications in Data Centers • Academic / Industrial Engineering Experience	Term effective through 31 December 2017

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Past Distinguished Lecturers

Last updated 3/28/2023

Bhumip Khasnabish	• New Generation of Networking • Multimedia Services Peering • Evolution of IP Multimedia Subsystem (IMS) • Harmonization of Network/Service Elements • Convergence: Service and Network Viewpoints	Term effective through 31 December 2010
Joongheon Kim	• Deep Reinforcement Learning for Autonomous Mobility • Deep Reinforcement Learning for Wireless Networks • Resource Allocation for B5G/6G Wireless Networks • Federated and Split Distributed Learning • Networked and Distributed Computing for AR/VR/MR Systems Virtual Lecture Topics • Deep Reinforcement Learning for Autonomous Mobility • Deep Reinforcement Learning for Wireless Networks • Resource Allocation for B5G/6G Wireless Networks • Federated and Split Distributed Learning • Networked and Distributed Computing for AR/VR/MR Systems	Term effective through 31 December 2023
Marwan Krunz	• Dynamic spectrum access and cognitive radio networks • Physical-layer wireless security • Cooperative MIMO communications • Energy management in wireless sensor networks	Term effective through 31 December 2014
Adlen Ksentini	• 5G and Mobile Network • Network Softwerization, Network Virtualization, SDN, NFV • Mobile Edge Computing (MEC) • Network Slicing	Term effective through 31 December 2021
Lutz Lampe	• Power Line Communications - Advanced Signal Processing and Communication Theory • Power Line Communications - From Home Networking to Smart Grid • Physical Communications Techniques for Smart Grid	Term effective through 31 December 2013

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Past Distinguished Lecturers

Last updated 3/28/2023

Tho Le-Ngoc	• Advances in Broadband Access Communications • Multimedia Satellite Communications • Adaptive Transmission and Dynamic Resource Allocation • Broadband xDSL Access Communications • Collaborative & Cognitive Communications	Term effective through 31 December 2009
Alberto Leon-Garcia	• Carrier-Class Peer-to-Peer Networking • What is an Application Oriented Network? • Towards Autonomic Networks	Term effective through 31 December 2009
Khaled Letaief	• Broadband Wireless Access in Next-generation Wireless Networks • 3G Mobile Systems • Access Technologies for B4G Wireless Systems	Term effective through 31 December 2008
Kin K. Leung	• Deep Reinforcement Learning for Control and Management of Communication Networks • Optimized Resource Allocation and Computation in Wireless Networks • Federated Learning for Edge Computing with Resource Constraints • Communication and Sensor Networks: From Stochastic Models, Distributed Optimization to Machine Learning Virtual Lecture Topics • Deep Reinforcement Learning for Control and Management of Communication Networks • Optimized Resource Allocation and Computation in Wireless Networks • Federated Learning for Edge Computing with Resource Constraints • Communication and Sensor Networks: From Stochastic Models, Distributed Optimization to Machine Learning	Term effective through 31 December 2023

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Past Distinguished Lecturers

Last updated 3/28/2023

Victor C. Leung	• Service and Network Convergence in Next Generation Networks • Mobile Agents in Wireless Sensor Networks • Wireless Networks for Vehicle-Infrastructure Integration • From WPAN to WBAN: Short Range Packet Communications	Term effective through 31 December 2012
Cheng Li	• Opportunistic and Cooperative Forwarding in Mobile Ad-hoc Networks with Light-Weight Proactive Source Routing • Energy-Efficient Coordination Schemes for Underwater Acoustic Sensor Networks Virtual Lecture Topics • Opportunistic and Cooperative Forwarding in Mobile Ad-hoc Networks with Light-Weight Proactive Source Routing • Energy-Efficient Coordination Schemes for Underwater Acoustic Sensor Networks	Term effective through 31 December 2022
Bo Li	• Optical Networks, specifically on WDM Systems • Wireless Networks (Cellular Systems) • Wireless Ad Hoc Networks and Sensor Networks • Multimedia Communications, specifically related to video communications and video multicast • General topics in computer networks and Internet • Peer-to-Peer systems	Term effective through 31 December 2007
Geoffrey Ye Li	• From OFDM and SC-FDE to EST-based Modulation • Join Physical and MAC Layer Optimization for Wireless Networks: Centralized • Join Physical and MAC Layer Optimization for Wireless Networks: Distributed • Signal Processing Issues in Cognitive Radios	Term effective through 31 December 2010
Jin Li	• Locality aware P2P delivery: the way to scale Internet Video • Towards Glitch Free VoIP and Video Conferencing • Data in the Cloud: Design of Efficient Storage Systems • High Performance Enterprise Computing with Solid State Drive (SSD)	Term effective through 31 December 2012

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Past Distinguished Lecturers

Last updated 3/28/2023

Mo Li	• TBA Virtual Lecture Topics • Deployment and measurement experience with LPWAN • Sensing with WiFi - theory, practice, challenges, and limits	Term effective through 31 December 2023
Tiffany Jing Li	• Wireless Networked Communication: Unifying Source Coding, Channel Coding, and Network Coding • Order Out of Chaos: A New Paradigm of Error Correction Coding with Application to Sensor Networks and Image Transmission • Linear Analog Codes: The Good, the Bad and the Unknown • Exploring A New Face of Turbo Codes: From Binary Codes to Real Number Codes • Theory and Practice of Distributed Source Coding: Generality, Optimality, and Rate Adaptivity • Wireless Localization: The Challenging Cases of Indoor, 3D and Network Localization	Term effective through 31 December 2013
Ying-Chang Liang	• Cognitive Radio Networks • Cooperative Wireless Communications	Term effective through 31 December 2014
Wanjiun Liao	• Green communications and networking • Wireless multimedia networking • Cloud-aware data center networking	Term effective through 31 December 2012
Phone Lin	• Machine to Machine (M2M)/Internet of Things (IoT) • Energy Efficient Networking for 5G Networks • Anomaly Detection/Prediction for Internet of Things • Performance Modeling of Mobile Networks	Term effective through 31 December 2020
Ying-Dar Lin	• Research Roadmap Driven by Network Benchmarking Lab: Deep Packet Inspection, Traffic Forensics, Embedded Benchmarking, WLAN/LTE, and Beyond • Traffic Forensics: Capture, Replay, Classification, Detection, and Analysis • Benchmarking Smartphones: Methodologies, Tools, and Results • Open Source Resources for Networking • Software Defined Networking: Why, Where, When, and How • Experience Sharing on International Academic Services and Research	Term effective through 31 December 2018

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Past Distinguished Lecturers

Last updated 3/28/2023

Jiajia Liu	• Fundamental Performance Analysis in Two-Hop Relay Mobile Ad Hoc Networks • Cooperative Jamming in Wireless Networks with Eavesdroppers at Arbitrary Locations • Device-to-Device Communication for Load Balancing and Coverage Extension in LTE-Advanced Networks • Advanced Ad Hoc and Mesh Networks: From Theoretical to Practical	Term effective through 31 December 2017
Pascal Lorenz	• NGN (Next Generation Networks) • QoS and QoE • Networking Protocols • Wireless LAN and Broadband Internet • Service and Network Convergence	Term effective through 31 December 2014
Yuanqiu Luo	• ITU and IEEE Standards in Optical Access • Optical Access Technologies for 5G Wireless Network Fronthaul • Passive Optical Network Technologies and applications • Ultra-low Latency Services over Fiber Access • 50 Gbit/s Passive Optical Network (50G-PON): Standards Progress and Applications in 5G Virtual Lecture Topics • ITU and IEEE Standards in Optical Access • Optical Access Technologies for 5G Wireless Network Fronthaul • Passive Optical Network Technologies and applications • Ultra-low Latency Services over Fiber Access • 50 Gbit/s Passive Optical Network (50G-PON): Standards Progress and Applications in 5G	Term effective through 31 December 2023
Liangping Ma	• 5G NR • Video communication	Term effective through 31 December 2020

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Past Distinguished Lecturers

Last updated 3/28/2023

Maode Ma	• Security Enhancements over the Communication Networks in Smart Grid • Security Enhancement for M2M in Cyber-Physical Systems • Enhance Security Functionality for M2M in 6LoWPANs • Migration of IP Network to the SDN Network • Bandwidth Efficient Multicast in HetNets	Term effective through 31 December 2016
Manu Malek	• Security and Information Assurance • WLAN Security	Term effective through 31 December 2006
Narayan Mandayam	• Backhauling in TV White Spaces • Network Coding as a Dynamical System • Enabling Cognitive Radio Networks • Green Techniques for Wireless Communications • Forces and Strategies that Shaped the Wireless Revolution	Term effective through 31 December 2015
Athanassios Manikas	• Wireless positioning, localisation and tracking using large aperture antenna arrays • Antenna array manifolds and channel capacity • Spatiotemporal channel estimation and interference cancellation • Space-time beamformers with massive mainlobe gain using an antenna array with limited number of antennas • Massive and spatiotemporal MIMO: comparative studies of “non-parametric” and “parametric” approaches • Designing and analysing current and future communication systems using Differential Geometry	Term effective through 31 December 2017
Shiwen Mao	• Key technologies for 5G and beyond • Machine learning for wireless communications and networking • Spectrum sensing and sharing • RF Sensing, indoor localization, and eHealth Virtual Lecture Topics • Key technologies for 5G and beyond • Machine learning for wireless communications and networking • Spectrum sensing and sharing • RF Sensing, indoor localization, and eHealth	Term effective through 31 December 2022

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Past Distinguished Lecturers

Last updated 3/28/2023

George Mattathil	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: • Technical (product design) • Market (product marketing) • Business strategy	Term effective through 31 December 2007
Tommaso Melodia	• Intra-Body Sensor Networks of Miniaturized Implantable Devices • Toward a Wireless Underwater Internet of Things: Algorithms, Architectures, Devices • The Platforms for Advanced Wireless Research (PAWR) Program: Wireless Experimentation for 5G and Beyond • New Approaches for 5G Software-Defined Wireless Networking • A Unified Optimization Framework for 5G Network Slicing • Secure-by-Design Polymorphic IoT Platforms with Artificial Intelligence	Term effective through 31 December 2020
Madjid Merabti	• Critical Infrastructure Protection: A 21st Century Challenge • Sharing Human Digital Memories – Practical Challenges • The Challenge of Society in the 21st Century- Being Remote but Always Connected • Wireless Networking a State of the Art • The State of the Art in Network Security Research • Security in Ubiquitous Computing Environments • On Line Games and Security • Networked Appliances and Computer Entertainment	Term effective through 31 December 2012
Sudip Misra	• Role of IoT in Healthcare 4.0: Opportunities and Challenges • IoT in e-Health: From Wearables to Diagnostic systems • Synergizing IoT with 5G and Beyond: Applications, Challenges, and Scope • How UAVs and UAV Networks are shaping the future of communication. • UAV Networks: Architectures, Opportunities, Challenges, and Future • Future Communication and Networking Paradigms over the THz Frequency Spectrum • Enabling IoT over Massively Constrained Networks	Term effective through 31 December 2021

	Virtual Lecture Topics ● IoT in e-Health: From Wearables to Diagnostic systems ● UAV Networks: Architectures, Opportunities, Challenges, and Future ● Synergizing IoT with 5G and Beyond: Applications, Challenges, and Scope	
Urbashi Mitra	● Biological Communication Systems: Engineered and Natural ● Sparse Approximation for Large Scale Wireless Network Learning and Control ● Wireless channel Estimation: Opportunities for Exploiting Structure and Sparsity	Term effective through 31 December 2016
Andreas Molisch	● MIMO propagation channels ● Antenna selection in MIMO systems ● Ultrawideband impulse radio: from theory to practice ● Ultrawideband propagation channels and their impact on system design ● Cooperative communications for ad-hoc networks and infrastructure-based systems	Term effective through 31 December 2019
Hussein Mouftah	● Advances in Photonic Packet Switching Networks ● How to Make Optical Networks Survivable	Term effective through 31 December 2006
Shahid Mumtaz	● Intelligent Reflected Surfaces for Future Wireless System ● 6G: Vision, Requirements, Technical Challenges, Standardization & Implementations ● 5G Standardization, New Radio and Next-Generation Core (NGC)- 3GPP Release 15-16 ● Antenna design, Beamforming, Precoding, Massive MIMO, mmWave /THz Communication, and System Level Modelling ● Dynamic Spectrum Management: spectrum sharing, LTE-U/LAA, WiFi-LTE aggregation, Multefire, Satellite, and terrestrial spectrum sharing ● LTE to 5G: Vision, Requirements, Technical Challenges and Technologies for 6G ● Network Sharing, Network Slicing, NVF, SDN, Edge computing, and Caching ● Ultra Reliable and Low latency Communication (URLCC) for 5G, IoT, Time Sensitive networking and V2X communication	Term effective through 31 December 2022

	Virtual Lecture Topics ● Intelligent Reflected Surfaces for Future Wireless System ● 6G: Vision, Requirements, Technical Challenges, Standardization & Implementations ● 5G Standardization, New Radio and Next-Generation Core (NGC)- 3GPP Release 15-16 ● Antenna design, Beamforming, Precoding, Massive MIMO, mmWave /THz Communication, and System Level Modelling ● Dynamic Spectrum Management: spectrum sharing, LTE-U/LAA, WiFi-LTE aggregation, Multefire, Satellite, and terrestrial spectrum sharing ● LTE to 5G: Vision, Requirements, Technical Challenges and Technologies for 6G ● Network Sharing, Network Slicing, NVF, SDN, Edge computing, and Caching ● Ultra Reliable and Low latency Communication (URLCC) for 5G, IoT, Time Sensitive networking and V2X communication	
Arumugam Nallanathan	● Artificial Intelligence (AI) for Massive Internet of Things (mIoT) ● Massive Ultra-Reliable Connectivity in 6G ● Multiple Access Schemes for Massive IoT ● Intelligent Reflecting Surface (IRS) Enhanced Wireless Networks ● Artificial Intelligence (AI) for Unmanned Aerial Vehicles (UAV) ● Communication Technologies for Industrial IoT ● Technologies for 5G and beyond wireless networks ● Molecular Communications Virtual Lecture Topics ● Artificial Intelligence (AI) for Massive Internet of Things (mIoT) ● Massive Ultra-Reliable Connectivity in 6G ● Multiple Access Schemes for Massive IoT ● Intelligent Reflecting Surface (IRS) Enhanced Wireless Networks ● Artificial Intelligence (AI) for Unmanned Aerial Vehicles (UAV) ● Communication Technologies for Industrial IoT	Term effective through 31 December 2021 Term effective through 31 December 2023

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Qiang Ni	• Green Wireless Communications Systems • Mobile Edge Computing Virtual Lecture Topics • Green Wireless Communications Systems • Mobile Edge Computing • Intelligent Spectrum Sharing for Cognitive Radio Networks	Term effective through 31 December 2022
Zhisheng Niu	• A Paradigm Shift to Globally Resource-optimized and Energy-Efficient Networks (GREEN) • TANGO: Traffic-Aware Network planning and Green Operation • CHORUS: Collaborative and Harmonized Open Radio Ubiquitous Systems • Collaborative Radio Resource Management in Multiple Radio Networks	Term effective through 31 December 2015
Dusit Niyato	• Economic Analysis and Pricing Models of Internet-of-Things (IoT) • Wireless Powered Communications Networks: Architectures, Protocol Designs, and Standardization	Term effective through 31 December 2017
Michele Nogueira	• Empowering DDoS Attack Prediction through Machine Learning and Deep Learning • From Modeling to Experimentation - Predicting and Detecting DDoS and zero-day attacks • Data Science for Cybersecurity: An Overview Focused on Networking • Security, Privacy and Resilience in the Internet of Health Things Virtual Lecture Topics • Empowering DDoS Attack Prediction through Machine Learning and Deep Learning • From Modeling to Experimentation - Predicting and Detecting DDoS and zero-day attacks • Data Science for Cybersecurity: An Overview Focused on Networking • Security, Privacy and Resilience in the Internet of Health Things	Term effective through 31 December 2023

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Sedat Oelcer	• Magnetic Storage Systems: State-of-the-Art and Market Trends • A 50 Year Journey in Tape Storage	Term effective through 31 December 2007
Ai-Chun Pang	• Distributed Learning for Software-Defined Edge Networks in B5G/6G • Edge Intelligence for Autonomous and Connected Cars Virtual Lecture Topics • Distributed Learning for Software-Defined Edge Networks in B5G/6G • Edge Intelligence for Autonomous and Connected Cars	Term effective through 31 December 2023
Constantinos Papadias	• Basics of MIMO systems • Multi-user and Cooperative MIMO Systems • Compact Antennas for MIMO Communication	Term effective through 31 December 2013
Stefan Parkvall	• LTE, IMT-Advanced, and beyond • Future radio access - challenges	Term effective through 31 December 2012
Radia Perlman	• Network Protocols: Myths, Missteps, and Mysteries • How to Build an Insecure System out of Perfectly Good Cryptography • Distributed Trust: Is “Blockchain” the best approach? Virtual Lecture Topics • What is distributed trust, and is blockchain the best solution? • How to build an insecure system out of perfectly good cryptography • Network Protocols: Myths, Missteps, and Mysteries	Term effective through 31 December 2021
Neeli Prasad	• Internet of Things (IoT), Machine to Machine (M2M) and enabling technologies • Secure Frameworks and Architectures • Social Networking • Smart cities and communities	Term effective through 31 December 2014

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

Michael Pursley	• Energy-Efficient Routing in Mobile Frequency-Hop Ad Hoc Networks • Cross-Layer Protocols for Mobile Spread-Spectrum Ad Hoc Networks	Term effective through 31 December 2006
Yi Qian	• 5G wireless networks • Spectrum and energy efficient wireless network design • Wireless network modeling and simulations • Wireless security and network security • Cyber security • Vehicular networks • Smart grid communication infrastructures • Big data and cloud computing	Term effective through 31 December 2021
Chunming Qiao		Term effective through 31 December 2012
Tony Q.S. Quek	• AI: A Networking and Communication Perspective • Modelling, Learning, and Control in Future Wireless Networks • Towards Massive, Ultra-Reliable, and Low-Latency Communications • Machine Learning for Future Wireless Systems • Start thinking about 6G	Term effective through 31 December 2021
Giorgio Quer	• Machine Learning in Digital Medicine • Big Health Data with Wearables: Sensing, Processing and Outcomes • Device-to-Device Communication in 5G • Cellular and Device-to-Device Networks: towards Non-orthogonal Coexistence Virtual Lecture Topics • DETECT: Wearable Sensor Data to Predict COVID-19 and Viral Illnesses • Machine Learning in Digital Medicine • Big Health Data with Wearables: Sensing, Processing and Outcomes	Term effective through 31 December 2021 Term effective through 31 December 2023

IEEE Communications Society

Past Distinguished Lecturers

Last updated 3/28/2023

K. K. Ramakrishnan	• Networking the Cloud: Enterprise-ready Cloud Computing and Storage Services • Building an end-end nationwide IPTV service • QoS and Traffic Management in Data Networks • LANs, MANs and Access Networks • Congestion Control	Term effective through 31 December 2013
Pradeep Ray	• Cooperative Service Management in Healthcare Sector • Towards ubiquitous healthcare in the world: emerging trends and challenges • eHealth and Telemedicine • ubiquitous Healthcare Infrastructure • mHealth for the Elderly • Ontologies for the Interoperability and Integration of Healthcare Information Systems	Term effective through 31 December 2015
George (Gee) Rittenhouse	• Future of Wireless Networking	Term effective through 31 December 2008
Joel J. P. C. Rodrigues	• Internet of Things (IoT) and Sensor Networks • e-Health and Mobile Health Technologies • Vehicular Networks	Term effective through 31 December 2021
Keith Ross	• Third Party Privacy Invasion: Attacks and Solutions	Term effective through 31 December 2014
George Rouskas	• Power-aware and computationally efficient optical network design • Net SILO: Architectural support for Internet evolution and innovation • A framework for hierarchical traffic grooming in optical networks	Term effective through 31 December 2011
Sumit Roy	• Cognitive Radio - Algorithms & Architectures • Co-existence in a Multi-radio Environment: Principles, Architectures and Implementations • White Space Networks: From TV bands to Government Users	Term effective through 31 December 2018

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Past Distinguished Lecturers

Last updated 3/28/2023

Walid Saad	• Machine Learning for Wireless Networks with Artificial Intelligence (AI) • Wireless Communications and Networking with Unmanned Aerial Vehicles (UAVs) • Virtual Reality over Wireless Networks: Modeling and Optimization • Ultra Reliable Low Latency Communications (URLLC): Learning, Networking, and Control • Wireless Communications for Autonomous Vehicular Systems • The Internet of Things: Enablers, Technologies, and Applications • Wireless Networking with Human-in-the-Loop • Towards Resilient Smart Cities • Security of Unmanned Aerial Vehicle Systems • Security of the Internet of Things • Context-Aware Wireless Networks • Online Optimization for Fog Computing • Game Theory for Wireless Networks • Resource Management in Millimeter Wave Networks • Social Network-Aware Wireless Communication • Prospect Theory for Wireless and Cyber-Physical Systems • Caching in Wireless Networks • Smart Grid Energy Management and Security • Wireless Physical Layer Security • Modeling and Optimization of Cyber-Physical Systems	Term effective through 31 December 2020
Brian Sadler	• Autonomy and Multi-Agent Communications • Physical Layer Fingerprinting By Design: Authentication and Security • A New Perspective on Lower-VHF • Driverless Cars: Alice or Bob? (For general audiences) Virtual Lecture Topics • Physical Layer Fingerprinting By Design: Authentication and Security • A New Perspective on Lower-VHF Communications • Driverless Cars: Alice or Bob?	Term effective through 31 December 2021 Term effective through 31 December 2023
Roberto Saracco	• The Digital Transformation • Smart Cities • Symbiotic Autonomous Systems Virtual Lecture Topics	Term effective through 31 December 2020

	• Use of Personal Digital Twin to monitor and contain epidemics • The Digital Transformation • Augmented Machines and Augmenting Humans	
Edward (Ted) H. Sargent	• Nanotechnology and Stimulated Self-assembly • Self-organized Photonic Structures for Optical Signal Processing • Solution-processed Infrared-emitting Quantum Dots for Optics-electronics Integration	Term effective through 31 December 2006
Hikmet) Sari	• Broadband Wireless Access • Broadband Cable Access	Term effective through 31 December 2006
Robert Schober	• Molecular Communication for Future Nanonetworks • Wireless Powered Communication Systems: Overview, Recent Results, and Challenges • Buffer-aided relaying: Introduction, Recent Advances, and Challenges	Term effective through 31 December 2018
Henning Schulzrinne	• VoIP - Beyond Replicating the Limitations of the Past • Next-Generation Emergency Calling (NG911) • The Vision and Reality of Ubiquitous Computing • Making VoIP and WiFi Play Nice Together	Term effective through 31 December 2009
Dominic Schupke	• Resilience in Network Virtualization • Multi-Layer Networking	Term effective through 31 December 2014
Abdallah Shami	• Achieving High Availability for Multi-Tiered Cloud-Based Applications • Network Function Virtualization • Wireless Network Virtualization	Term effective through 31 December 2017
Gangxiang Shen	• Optical networks • Green network communications • Network survivability • Fiber-wireless integration • Content delivery networks (CDN)	Term effective through 31 December 2019

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Past Distinguished Lecturers

Last updated 3/28/2023

Xuemin (Sherman) Shen	• Resource management of Wireless Networks • Medical Body Area Networks	Term effective through 31 December 2010
Biplab Sikdar	• Internet of Things: Technologies and Challenges for Beyond-5G Networks • Cyber Security Challenges and Solutions for the Internet of Things • Cyber Security and Privacy for Smart Cities • Securing Smart Grids: Attacks, Countermeasures and Defense Strategies Virtual Lecture Topics • Cyber Security Challenges and Solutions for the Internet of Things • Cyber Security and Privacy for Smart Cities • Securing Smart Grids: Attacks, Countermeasures and Defense Strategies	Term effective through 31 December 2022
Osvaldo Simeone	• Meta-learning for communication systems • Federated learning in communication systems • Neuromorphic computing and communication systems Virtual Lecture Topics • Meta-learning for communication systems • Federated learning in communication systems • Neuromorphic computing and communication systems	Term effective through 31 December 2022
Besma Smida	• InBand Full-Duplex (IBFD) communication networks • MIMO IBFD transceiver design • Single-antenna IBFD using backscatter modulation • Advanced self-interference cancellation techniques — Machine Learning • Delay, reliability, rate tradeoffs in wireless broadcast channels Virtual Lecture Topics • InBand Full-Duplex (IBFD) communication networks • MIMO IBFD transceiver design • Single-antenna IBFD using backscatter modulation	Term effective through 31 December 2022
Kazem Sohraby	• Emerging Transmission Technologies • Emerging Switching Technologies	Term effective through 31 December 2006

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Arun K. Somani	• Monitoring the US Power Grid Using Wireless Sensor Networks • Survivable Path Level Traffic Grooming in WDM Optical Networks • Capacity-Balanced Efficient Protection and Grooming Optical Architecture • RDFN - Robust, Dynamic and Fair or (Real-Damn-Fast) Network • Wavelength-Division-Multiplexing-Based Networks: Issues and Challenges • Issues in Optical Interconnection of LANs • End-to-End Packets and Circuits over Fiber • Fault and Attack Management in Optical Network	Term effective through 31 December 2012
Lingyang Song	• Full-Duplex Wireless Communications: Key Technologies and Applications • Device-to-Device Communications and Networks • Smart Grid Communications and Networking • Signal Processing and Resource Allocation for Physical-Layer Security • Game-theoretic Methods for Wireless Communications	Term effective through 31 December 2018
Rayadurgam Srikant	• Network Optimization, Architecture and Algorithms • Distributed Scheduling Algorithms for Wireless Networks • Shadow-Queue Architecture for Adaptive Routing and Scheduling	Term effective through 31 December 2012
James Sterbenz	• Resilient, survivable, and disruption-tolerant mobile wireless networking • Programmable, adaptive, extensible, and active networks • High-speed networking architecture, technology, and design principles	Term effective through 31 December 2007
Gordon Stüber	• MIMO Mobile-to-Mobile Channel Modeling • Synchronization for MIMO-OFDM • Cognitive Radio in DTV Bands	Term effective through 31 December 2008
Tatsuya Suda	• Molecular Communication: New Paradigm for Communication Among Nano-Scale Biological Machines • The Bio-Networking Architecture: A Biologically Inspired Approach to the Design of Computer Networks and Network Applications • New Research Directions in Networks: from Sociology to Biology	Term effective through 31 December 2010

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Suresh Subramaniam	• Data center networking • Elastic/flex-grid optical networks • Performance optimization in cloud computing Virtual Lecture Topics • The evolution of data center network architectures • Elastic optical networks • Straggler mitigation in cloud computing	Term effective through 31 December 2021
Tarik Taleb	• Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks • Congestion Management in 5G Mobile Systems • Mobile Networks As A Cloud Service • Mobile Cloud Networking • Network Function Virtualization: From Architecture to Implementation	Term effective through 31 December 2017 Term effective through 31 December 2020
Chee Wei Tan	• Perspectives on Artificial Intelligence (AI) in Networks: Past, Present and Future • Healthcare Big Data Analytics for COVID-19 Challenges: Digital Contact Tracing and Infodemic Management • Information Inequalities: Facets of Entropy and Automated Reasoning by Optimization • Cloud Computing and Fog Computing for Big Data Applications • Federated Learning and Distributed Machine Learning over Networks • Automated Reasoning by Convex Optimization in Information Theory • Smart Cloud Pricing: Theory, Algorithms and Applications • Optimizing Software-Defined Radio Networks • Epidemic Source Statistical Inference with Applications to COVID-19 Pandemic and Infodemic • Distributed Optimization for Cloud-driven Communication-Efficient Machine Learning Virtual Lecture Topics • Healthcare Big Data Analytics for COVID-19 Challenges: Digital Contact Tracing and Infodemic Management • Information Inequalities: Facets of Entropy and Automated Reasoning by Optimization • Perspectives on Artificial Intelligence (AI) in Networks: Past, Present and Futurere	Term effective through 31 December 2022

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	• Epidemic Source Statistical Inference with Applications to COVID-19 Pandemic and Infodemic • Automated Reasoning by Convex Optimization in Information Theory	
John Thompson	• Green Wireless Communications and Smart Grid Technologies • Multiple Antenna Communications Systems • Wireless relay communications systems and distributed multiple antenna technologies	Term effective through 31 December 2015
Zhi Tian	• Compressive Sensing: Theory, Algorithms and Applications • Cognitive Radio Communications • Wideband Spectrum Sensing for Cognitive Radios • Cooperative and Distributed Sensing for Wireless Sensor Networks	Term effective through 31 December 2016
Christian Timmerer	• HTTP Adaptive Streaming (HAS) -- Quo Vadis? • Quality of Experience (QoE) for Traditional and Immersive Media Services • Immersive Media Services: from Encoding to Consumption • 20 Years of Streaming in 20 Minutes • Multimedia Communication, Networking, Protocols, Delivery • Multimedia Standards (MPEG, IETF, W3C) Virtual Lecture Topics • HTTP Adaptive Streaming (HAS) -- Quo Vadis? • Quality of Experience (QoE) for Traditional and Immersive Media Services • Immersive Media Services: from Encoding to Consumption • 20 Years of Streaming in 20 Minutes • Multimedia Communication, Networking, Protocols, Delivery • Multimedia Standards (MPEG, IETF, W3C)	Term effective through 31 December 2022
Ioannis Tomkos	• Transparent Optical Networks • Impairment Constraint Routing in Wavelength Routed Networks • Performance and technology trends in ultra-long-haul optical networks • Performance and design issues in metropolitan area optical networks	Term effective through 31 December 2007

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Andrea M. Tonello	• Power line communications: from vehicular to smart grid applications • Power line beyond communications: sensing and diagnostics for power networks • The role of communications, sensing and computing in smart grids • Filter bank modulation, waveforms and friends for wireless and wireline communications • Multiple antenna radio localization: challenges, techniques and applications from smart cars to UAVs • The role of communication, localization and control in UAV systems	Term effective through 31 December 2019
Wen Tong	• Machine Learning Based Post-Shannon Cognition Communications • Non-Terrestrial Massive-Satellite Communications Networks • Wireless Network Sensing and Meta-Reality Modeling • Zero-Knowledge based Trustworthiness Communications • Topics on Pre-6G Proof of Concept Field Trials Virtual Lecture Topics • Machine Learning Based Post-Shannon Cognition Communications • Non-Terrestrial Massive-Satellite Communications Networks • Wireless Network Sensing and Meta-Reality Modeling • Zero-Knowledge based Trustworthiness Communications • Topics on Pre-6G Proof of Concept Field Trials	Term effective through 31 December 2023
Joe Touch	• A Recursive Network Architecture for the Future Internet • An Optical Turning Machine for High-Speed Networking • The Case for Weaker Network Security • Breaking the Internet Hourglass: One Packet Only and Other Curiosities • Internet Policy and Piracy: The Good, the Bad, and the Practical	Term effective through 31 December 2014

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Don Towsley	• Network security • The Internet as a complex system • Network modeling, analysis, and control • P2P applications, overlays, and their interactions with the Internet	Term effective through 31 December 2007
Kishor Trivedi	• Survivability Quantification • Software Aging and Rejuvenation • High Availability Software System Assurance • Performability Modelling of Wireless Communication Systems • Performance and Reliability of Composite Web Services • Modeling SIP Application Server Reliability • Stochastic Petri Nets • Reliability and Availability Modeling using the SHARPE Software Package	Term effective through 31 December 2012
Damla Turgut	• Physical and computational modeling of smart homes • Communication, computation, and privacy trade-off in machine learning for smart environments Virtual Lecture Topics • Physical and computational modeling of smart homes • Communication, computation, and privacy trade-off in machine learning for smart environments	Term effective through 31 December 2022
Mehmet Ulema	• Management of next generation wireless networks • Management of wireless ad-hoc and sensor networks • Wireless Sensor Networks: Applications, Architectures, Protocols and Management • Network Management: An overview	Term effective through 31 December 2008
Umit Uyar		Term effective through 31 December 2013
Nitin Vaidya	• Wireless Mesh Networks • Protocols for Multi-Channel Wireless Networks • Utilizing Directional Antennas in Multi-Hop Wireless Networks	Term effective through 31 December 2007

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Shahrokh Valaee	• Indoor Localization of Wireless Nodes • Positioning in 5G and beyond • Vehicular Communication and Networking • Machine Learning with Imbalanced Data • Pruning of Deep Neural Networks • Scheduling in Cellular and Vehicular Environment • Network Reoptimization for 6G and UAV-assisted networks Virtual Lecture Topics • Indoor Localization of Wireless Nodes • Positioning in 5G and beyond • Vehicular Communication and Networking • Machine Learning with Imbalanced Data • Pruning of Deep Neural Networks • Scheduling in Cellular and Vehicular Environment • Network Reoptimization for 6G and UAV-assisted networks	Term effective through 31 December 2022
Mihaela van der Schaar	• Design Principles for Social Networks • Shannon Revisited: New Separation Principles for Wireless Multimedia • New Classes of Multi-user Communication Games • Mechanism Design for Engineers: The Theory of Intervention Games with Application to Wireless Networks • Network economics	Term effective through 31 December 2012
Rath Vannithamby	• 5G Evolution and Candidate Technologies • M2M Communications for Internet of Things	Term effective through 31 December 2017
César Vargas-Rosales	• 5G, A spectral efficiency perspective using MIMO • Localization for ad-hoc and sensor networks • Connectivity in wireless networks • Stochastic modeling for networking • Error correcting codes for communications and storage Virtual Lecture Topics • 5G, A spectral efficiency perspective using MIMO • Localization for ad-hoc and sensor networks • Connectivity in wireless networks • Stochastic modeling for networking • Error correcting codes for communications and storage	Term effective through 31 December 2022

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Ranga Rao Venkatesha Prasad	• Energy Harvesting IoTs and Context awareness • Use of Constructive Interference in Energy Harvesting IoTs • Virtual Sensing and Approximate services in Future IoTs - A perspective • Millimeter wave communications for small cell networks • Sensor Assisted Beam steering for 60GHz small cell networks • Energy Disaggregation in smart homes	Term effective through 31 December 2020
A.J. Han Vinck	• Information Theory and Coding Techniques • Applications to Random Access; Memory Systems	Term effective through 31 December 2009
Beibei Wang	• WiFi can do more: towards ubiquitous wireless sensing • Wireless indoor positioning • mmWave/radar based sensing Virtual Lecture Topics • WiFi can do more: towards ubiquitous wireless sensing • Wireless indoor positioning • mmWave/radar based sensing	Term effective through 31 December 2023
Cheng-Xiang Wang	• General Non-Stationary Wireless Channel Models for 5G and Beyond • High-Speed Train Wireless Channel Measurements and Models • Massive MIMO Wireless Channel Measurements and Models • Spectral -Energy Efficiency Trade-off of 5G Wireless Communication Systems	Term effective through 31 December 2020

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Honggang Wang	• Smart and Connected health, eHealth and wireless health • Security, privacy and trust for connected Health services/applications • Body area networks • Integration of medical devices with wireless health • IoT for Smart and Connected Health • Internet of Things: Sensor and Devices, Communication and Networking, Applications • Communication System or Decision Support System design for connected health • Wearables & Bioelectronics • Communication/network infrastructures, and protocols • Software, systems and performance engineering for Connected Health • Multimedia E-health • Multimedia streaming over Wireless Networks, QoS and Multimedia applications. • Cloud-based Video Processing and Content Sharing	Term effective through 31 December 2020
Jiangzhou Wang	• In-building distributed antenna systems for broadband wireless communications • Device to device communications in cellular networks • Small cells and heterogeneous networks • Massive MIMO	Term effective through 31 December 2014
Chonggang Wang	• Internet of Things Architecture, Protocols, and Standards • Service Platform for Machine-to-Machine Communications • Content Management in Information-Centric Networks	Term effective through 31 December 2016
Moe Win	• Fundamentals of Ultrawide Bandwidth (UWB) Systems • Recent Advances in Ultrawide Bandwidth (UWB) Communications Networks	Term effective through 31 December 2009
Tilman Wolf	• Economic Principles for Future Internet Architecture • Attacks and Hardware Defenses for Network Infrastructure • Attack Containment in Off-by-Default Networks • Runtime Management of Multicore Network Processors	Term effective through 31 December 2017

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Vincent Wong	• Non-orthogonal multiple access (NOMA) • Internet of Things (IoT) and machine-type communications • Fog computing and mobile edge computing • Smart grid communications and networking	Term effective through 31 December 2020
Chengshan Xiao	• Globally Optimal Linear Precoders for Finite Alphabet Signals over Complex Vector Gaussian Channels • Underwater Acoustic Communications: Problems, Challenges and Undersea Experiment Results • Cooperative Multi-user Communications under Finite Alphabet Constraints: Theory and Practice • Wireless Fading Channel Modeling and Simulations	Term effective through 31 December 2012
Liang Xiao	• UAV-Aided Secure Communications with Reinforcement Learning Against Smart Jamming • Reinforcement Learning Aided Privacy Protection for IoT Virtual Lecture Topics • UAV-Aided Secure Communications with Reinforcement Learning Against Smart Jamming • Reinforcement Learning Aided Privacy Protection for IoT	Term effective through 31 December 2023
Larry G. Xue	• Coverage and Connectivity in Wireless Sensor Networks • Cross-layer Optimization for Wireless Mesh Networks • Multiconstrained QoS Routing and Multipath Routing • Robust Localization in Wireless Sensor Networks • Social Networks	Term effective through 31 December 2011
Liuqing Yang	• Underwater Communications and Networking • Resource Optimization in Wireless Communications	Term effective through 31 December 2017
Kun Yang	• Mobile edge computing, data and energy integrated networks • Internet of Things, UAV-enabled communications Virtual Lecture Topics • Mobile Edge Computing and Communications from the Sky	Term effective through 31 December 2021

	• Flexible IoT Gateways Supporting RF Energy Transfer • UAV-based Wireless Communications, Computing and Charging	
Halim Yanikomeroglu	• Emerging Concepts and Technologies towards 5G+ Wireless Networks • The New Frontier in RAN Heterogeneity: Drone-cells • The IoE (Internet of Everything) Revolution and 5G+ • Promising PHY Research Directions for 5G+ Wireless • The HetHetNets Framework for 5G+ Wireless Networks: Highly Heterogeneous Traffic, Unprecedented Congestion, and Novel Solutions	Term effective through 31 December 2018
Yu-Dong Yao	• Cognitive radio networks • Security issues in cognitive radio networks • Analytical methods in cognitive radio research • Undergraduate and graduate education in electrical and computer engineering	Term effective through 31 December 2018
Edmund Yeh	• Data-centric network architectures • Optimal caching • Edge computing • Wireless network optimization • Data-intensive science and engineering Virtual Lecture Topics: • Data-centric network architectures • Optimal caching • Edge computing • Wireless network optimization • Data-intensive science and engineering	Term effective through 31 December 2022
Aylin Yener	• Wireless Physical Layer Security for the Connected World • Energy Harvesting Wireless Networks: A New Frontier for Communications • Coded Caching for Next Generation Content Delivery	Term effective through 31 December 2019
Richard Yu		Term effective through 31 December 2020

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Shui Yu	• Cybersecurity and Privacy: State-of-Art, Challenges, and Opportunities • Networking for Big Data: Challenges and Opportunities • Big Data Privacy from Networking and AI Perspective Virtual Lecture Topics • Cybersecurity and Privacy: State-of-Art, Challenges, and Opportunities • Networking for Big Data: Challenges and Opportunities • Big Data Privacy from Networking and AI Perspective	Term effective through 31 December 2021
Wei Yu	• Cloud Radio-Access Networks • Interference Mitigation with Cooperative Relay • Massive MIMO vs. Network MIMO • Interference Alignment for Cellular Networks	Term effective through 31 December 2016
Angela Yingjun Zhang	• Learning to Optimize in Information and Communications Systems • Randomized Message Passing in Ultra Dense Wireless Networks • Stochastic Optimization and Learning in Smart Grids	Term effective through 31 December 2021
Haijun Zhang	• Radio Resource Management in 6G Networks • Deep Learning/Machine Learning in 6G Network Optimization • AI enabled 6G Networks • Key Technologies for 6G Networks Virtual Lecture Topics • Radio Resource Management in 6G Networks • Deep Learning/Machine Learning in 6G Network Optimization • AI enabled 6G Networks • Key Technologies for 6G Networks	Term effective through 31 December 2023
Junshan Zhang	• Fundamentals of Distributed Opportunistic Scheduling • Networked Communication and Computation for Wind Generation Forecast • Network Interdependence in Cyber-physical Systems	Term effective through 31 December 2014

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Qian Zhang	• Advances in Cognitive Radio Networks • Dynamic Spectrum Access for Efficient Spectrum Management • Cooperative Wireless Networks • Cross-Layer Design for Wireless Mesh Networks • Wireless Sensor Networks and Applications	Term effective through 31 December 2011
Rui Zhang	• UAV communications for 5G and beyond • Intelligent reflecting surface aided wireless communication • Wireless powered communication: theory and practice	Term effective through 31 December 2020
Xi Zhang	• Statistical QoS Guarantees for Wireless Communications Networks • Cross-Layer Optimization for Cognitive Radio Wireless Networks • Mobile Multicast Communications over Wireless Networks • Multimedia Wireless Sensor Networks • Wideband Communications and QoS Provisionings for Vehicular Networks • Advances in Cooperative Wireless Communications and Relay Networks • Wireless Network Coding	Term effective through 31 December 2013
Wei Zhang	• Interference Coordination in 5G Cellular Networks • Spectrum Sharing in Ultra Dense Networks • Signal Transmission Techniques for Massive MIMO • Energy Harvesting Communications and Networks	Term effective through 31 December 2017
Yan Zhang	• Mobile Edge Computing and Edge Intelligence • Digital Twin for 6G and Internet of Things • Blockchain for 6G and Internet of Things • Deep Reinforcement Learning for 6G and Internet of Things • Internet of Vehicles Virtual Lecture Topics • Edge Intelligence • Digital Twin for 6G and Internet of Things • Blockchain for 6G and Internet of Things	Term effective through 31 December 2022

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Zhensheng Zhang	• Cloud computing, fog/edge computing, IoT • Machine learning based Cognitive radio/networks • 5G and beyond • Dynamic spectrum allocation • Artificial intelligence (AI) based on Delay Tolerant Networks (DTN) Virtual Lecture Topics • Fog computing overview	Term effective through 31 December 2021
Lian Zhao	• Service scheduling and Resource Management for future wireless communication networks • Dynamic mobile edge caching: applications and theories • Channel allocation for Vehicular ad-hoc Networks • Energy efficiency maximization with multi-channel communications Virtual Lecture Topics • Collaborative task offloading and scheduling with mobile edge computing • Service Scheduling and Resource Management for Future Wireless Communication Networks • Dynamic Mobile Edge Caching: Applications and Theories	Term effective through 31 December 2021
Zuqing Zhu	• Network function virtualization (NFV) in optical networks • Network softwarization in 5G • Software-defined networking (SDN) with Protocol Oblivious Forwarding (POF) • Service provisioning in elastic optical networks (EONs) • Knowledge-defined multilayer optical networks	Term effective through 31 December 2021
Weihua Zhuang	• Resource Allocation for Cellular/WLAN Integrated Networks • QoS Routing in Mobile Ad Hoc Networks • Distributed Medium Access Control for QoS Support in Wireless Networks • Routing and Medium Access Control for Delay Tolerant Traffic in Mobile Ad Hoc Networks • Hybrid Mobile User Location and Non-Line-of-Sight Error Mitigation	Term effective through 31 December 2011