#GLOBECOM PROGRAM HIGHLIGHTS

Showcasing Next Generation Technologies & Innovations

IEEE GLOBECOM 2015, the premier international event dedicated to driving innovations and technological breakthroughs in nearly every aspect of communications, will hold its 58th annual event from 6 - 10 December at the Hilton San Diego Bayfront Hotel.

Themed **"Connecting All Through Communications,"** the program will showcase the entire communications spectrum ranging from mobile cloud computing and green ICT to 5G cellular and Internet of Things (IoT) networking services and applications.

PROGRAM AT A GLANCE

	SUNDAY 6-Dec		MONDAY 7-Dec		TUESDAY 8-Dec		WEDNESDAY 9-Dec		THURSDAY 10-Dec	
08:15–09:45	Technical Tutorials & Workshops	Industry Tutorials & Workshops	Keynotes		Keynotes		Keynotes		Technical Tutorials & Workshops	Industry Tutorials & Workshops
10:00–10:45	Coffee Break		Coffee Break		Coffee Break		Coffee Break		Coffee Break	
11:00–12:00	Technical Tutorials & Workshops	Industry Tutorials & Workshops	Technical Sessions	Industry Executive Forum	Technical Sessions	Plenary	Technical Sessions	Industry Panels	Technical Tutorials & Workshops	Industry Tutorials & Workshops
12:15–13:45	Lunch		Awards Luncheon		Lunch	WIE-WICE AQUAC	Lunch	Startup Entrepreneur Panel	Lunch	
14:00–15:30	Technical Tutorials & Workshops	Industry Tutorials & Workshops	Technical Sessions	Industry Panels	Technical Sessions	Industry Executive Forum	Technical Sessions	Industry Panels	Technical Tutorials & Workshops	Industry Tutorials & Workshops
15:45–16:00	Coffee Break		Coffee Break		Coffee Break		Coffee Break	Coffee Break	Coffee Break	
16:15–17:45	Technical Tutorials & Workshops	Industry Tutorials & Workshops	Technical Sessions	Industry Panels	Technical Sessions	Industry Panels & Lightning Talks	Technical Sessions	Industry Panels	Technical Tutorials & Workshops	Industry Tutorials & Workshops
18:00–19:45	Welcome Reception & Exhibit Opening		Young Professionals & Dialogue with Industry Leaders							
20:00–21:45					Conference Banquet					

Exhibits

Updated: October 11, 2015
For the latest program, always visit
http://www.ieee-globecom.org/2015/

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KEYNOTE SPEAKERS

Keynote Session
Monday, 7 December 2015
08:15 - 10:00

Mark Dankberg

Mark Dankberg, Co-Founder, CEO and Chairman of the Board of ViaSat, will discuss *"Connecting the Un-connected: The Role of Satellites for Internet Access"* and provide some surprising facts about the geographic distribution of demand for connectivity, trade-offs among the technical and economic factors that determine cost effective supply, and the role that space can play in serving that demand.

Eric Starkloff

Eric Starkloff, Executive Vice President of Global Sales and Marketing of National Instruments, will speak on *"Transforming Traditional Design Paradigms in 5G Wireless Communications"* and overcoming complex system challenges with software defined radio and new graphical approaches.

Keynote Session
Tuesday, 8 December 2015
08:15 - 10:00

Matt Grob

Matt Grob, EVP and CTO, Qualcomm Technologies, Inc., will talk about *"From 4G to 5G: The Evolution of Mobile Communication"* and the arrival of LTE in unlicensed spectrum, expanded connectivity needs and new connectivity paradigms.

Ron Nersesian

Ron Nersesian, President and CEO, Keysight Technologies, will address *"The Future of Test and Measurement for Commercial Communications"* including the drive to further simulation, measurement, and validation dimensions with an unprecedented emphasis on software and applications relating to network performance.

Keynote Session
Tuesday, 8 December 2015
10:30 - 12:15

Sachin Katti

Sachin Katti, Assistant Professor of Electrical Engineering and Computer Science at Stanford University, will speak on *"Full Duplex Radios: From Impossibility to Practice"* including issues related to self-interference cancellation and the cross-disciplinary nature of the research enabling the design and build of world LTE phones, spectrum slicing, WiFi channel aggregation, mesh networks and novel backscatter RF imaging applications..

Seizo Onoe

Seizo Onoe, CTO, EVP, Member of Board of Directors, and Managing Director of R&D Innovation Division of NTT DOCOMO, INC., will cover *"Evolution toward 5G and Beyond"* as well as the current status of LTE, LTE-Advanced and the latest technology trends.

Keynote Session
Wednesday, 9 December 2015
08:15 - 10:00

Kenneth Stewart

Kenneth Stewart, Intel Fellow and Chief Wireless Technologist at Intel, will talk about the *"Future of Wireless Technologies – From 5G to IoT/MTC"* and the development of new radio access technologies (RAT(s) focused on flexible and efficient physical layer frameworks: low power, low overhead and highly scalable multiple-access designs supporting massive IoT access; and efficient and flexible time and frequency domain multiplexing providing the optimal tradeoff between reliability, latency and efficiency.

Wen Tong

Wen Tong, Huawei Fellow and Wireless CTO at Huawei, will discuss *"Bringing 5G into Reality"* and the global progress with respect to 5G requirements, spectrum identification and standardization, the views on the early market applications and long term full span of a 5G-world.

IEEE GLOBECOM 2015
2000+ ATTENDEES
FROM 70+ COUNTRIES

WWW.IEEE-GLOBECOM.ORG

More information about the Keynote and Plenary Speakers is available at www.ieee-globecom.org

INDUSTRY PROGRAM

The Industry Program specifically dedicated to Industry Practitioners includes moderated business panels, demonstrations and poster presentations designed to promote new ideas, trends and product innovations, while facilitating peer networking opportunities.

EXECUTIVE FORUMS

Monday, 7 December 2015 • 10:30 – 12:15
EF-1: Executive Forum: When Will 5G Be Real?

5G is coming. Of that there is no doubt. But when? Korea Telecom claims 2018, NTT DoCoMo claims 2020. Other entities have different estimates. This panel tries to remove the rhetoric and grandstanding by specifying a few concrete milestones: first large scale carrier trials, 1ms latency within 5km radius and 1Gbps average user throughput. Given these criteria, when will 5G really happen?

Moderator: Chen Chang,
Founder & CEO, BeeCube/NI, USA
Invited Guest Speakers: Satish Dhanasekaran,
VP & GM, Mobile Broadband Op, Keysight Technologies
Peter Gammel, CTO, Skyworks
Geng Wu, Chief Wireless Technologist, Intel
Byung K. Yi, CTO & Head, InterDigital Labs

Tuesday, 8 December 2015 • 14:00 – 15:45
EF-2: Executive Forum: Data Center Networking and Cloud Computing

With traffic continuing to grow due to mobile, video and cloud services, carriers face significant challenges on how to upgrade and re-architect their networks. In this panel, executives will explore network architecture approaches, transport connectivity systems, various optical effects and the component trends that will enable the industry to achieve cost-effective, high flexible and high bandwidth data infrastructure and services.

Moderators: Franklin Flint, CTO, TIA
Nikhil Jayaram, VP, Data Center Group & CTO, Network Platforms Group, Intel

Invited Guest Speakers: Rick Baldridge,
President & COO, Viasat
Nikhil Jayaram, VP, Data Center Group & CTO, Network Platforms Group, Intel
Joerg-Peter Elbers,
VP, Advanced Technology, ADVA Optical Networking
Kireeti Kompella,
CTO, Juniper Development and Innovation
Steve Yao, CEO, General Photonics

IEEE YOUNG ENGINEERS & DIALOGUE WITH INDUSTRY LEADERS EVENT

How to build a successful career in communications?
Monday, 7 December 2015 • 18:15 – 20:30

IEEE Young Engineers:
Advance Your Career to the Next Level
Panelists will give presentations about career paths and growth driver in academia, industry and startup community. Given the diverse nature of the communications field, the panel will provide tips for building a truly global professional network while successfully navigating different cultures.

Moderators: Steven R. Hart,
VP, Chief Technical Officer & Co-founder, ViaSat Inc.
Kenneth Stewart,
Intel Fellow & Chief Wireless Technologist, Intel
Invited Panelists: Pradeep K. Khosla, Chancellor, UCSD
Yan Hui, CEO & Co-founder, AirHop Communications
Mark Pierpoint, VP & GM, Keysight Technologies

Dialogue with Industry Leaders on Keys to a Successful Career in Communications
This is an interactive dialogue featuring top-level executives in communications. It is a great opportunity to ask questions regarding career paths, technology directions and trends and importance of a global professional network.

This is your chance to participate in cutting-edge discussions and unmatched peer-to-peer networking as you will hear real world solutions from various industry leaders that will help better manage career or business.

Moderators: Steven R. Hart,
VP, Chief Technical Officer & Co-founder, ViaSat Inc.
Kenneth Stewart,
Intel Fellow & Chief Wireless Technologist, Intel

Industry Panels are in-depth discussions led by industry leaders, innovators and researchers leading the next big wave of emerging technology in communications and networking.

Monday, 7 December 2015 • 14:00 – 15:45
IF-1: 5G mmWave Communications: Myth or Reality
IF-6: Optical Access Network Status and Directions
IF-7.1: Terahertz-band Communication Networks: Opportunities and Challenges in the Next Frontier for Wireless Communications
IF-22: 5G Cellular-IoT Challenges and Opportunities

Monday, 7 December 2015 • 16:15 – 18:00
IF-2: Massive MIMO vs FD-MIMO: Defining the Next Generation of MIMO in 5G
IF-4: Joint SDOs/Fora Industry Harmonization for Unified Standards on AMC (Autonomic Management & Control), SDN, NFV, Software-oriented Enablers for 5G
IF-7.2: Business, Technology and Spectrum Challenges beyond 20GHz towards THz Communications
IF-21: 5G, LTE and WLAN: Waveform Generation, Prototyping and Over-the-air testing of signals with MATLAB

Tuesday, 8 December 2015 • 14:00 – 15:45
IF-20: Insatiable Explosive Use of Wireless Connectivity in Crowded Sub 6GHz Bands

Tuesday, 8 December 2015 • 16:15 – 18:00
IF-5: SDN and Virtualization for Cable Industry Access Technologies and Wi-Fi Challenges
IF9: Clearing a Path to Wide-scale Transport SDN Deployment
IF14: Wearables: Our Experiences and Thoughts for the Future

Wednesday, 9 December 2015 • 10:30 – 12:00
IF-3.1: 5G Radio Access Network Technologies below 6GHz: from Concept to Reality
IF-8: Service Enablement at a Small-Cell Based Mobile Edge
IF-10: The Future Evolution of LTE
IF-13: Providing Internet Services Where Wireless or Wired Access Can't Reach

Wednesday, 9 December 2015 • 13:30 – 15:00
IF-3.2: 5G Theory to Practice: Experimental Testbeds and Prototyping of Next-generation Wireless Networks
IF-11: Critical Communication
IF-12: Intellectual Property: Recent Developments in Patent Laws and Policies Relevant to our Industry
IF-15: 5GPPP Architecture

Wednesday, 9 December 2015 • 15:30 – 17:00
IF-16: Emerging Technologies in IEEE 802.11 WLAN (Wi-Fi)
IF-17: Big Data for Information and Communications Technologies
IF-18: Education and Training for the Next Generation of Communications Engineers
IF-19: Technical Strategies for Migrating to a New Broadband Network

IEEE GLOBECOM 2015

1,500+

PRESENTATIONS

given by representatives from leading corporations and research institutes

#GLOBECOM

INDUSTRY PROGRAM

Lightning Talks, held Tuesday, 8 December 2015 from 16:15 – 18:00, offer a lively, informal format for 20 separate presenters to address timely and pressing technical industry topics in brief, five-minute talks. Speakers that desire to present lightning talks are encourage to sign up online on a first come first serve basis before Tuesday noon.

Interactive Demonstrations of leading communications corporations and researchers exploring areas such as 10Gbps E-band Radio Links, Dense Cooperative Wireless Cloud Networking, Intelligent Electric Vehicle Charging Systems and Radio-as-a-Service 4G LTE Networks.

Monday, 7 December – Wednesday, 9 December 2015 10:00 – 18:00
ID-1: 10Gbps E-band Radio Link
ID-2: 5G Architecture and 5GPPP
ID-3: A Prelude to the 5G Core Network Architecture
ID-4: A Real-time 20 MHz 128 Antenna Base station Massive MIMO with 12 UEs based on TDD Channel Reciprocity
ID-5: Bi-directional In-band Full Duplex Communication for Real-Time Video Contents Streaming
ID-7: Dense Cooperative Wireless Cloud Networks
ID-8: fuseami: The Smarter Networking App
ID-9: Intelligent Electric Vehicle Charging System
ID-10: Live End-to-End Ecosystem Trial of New Spectrum Sharing Concepts: European Licensed Shared Access Evolution towards US Spectrum Access System
ID-11: Pre 5G Wireless Concepts: DAN Anchor Booster
ID-12: Pre 5G Wireless Concepts: LAA/ LTE-U
ID-13: Pre 5G Wireless Concepts: LTE/ WIFI Aggregation
ID-14: Pre 5G Wireless Concepts: Millimeter Wave Backhaul
ID-15: Pre 5G Wireless Concepts: Open Internet Consortium SmatTap
ID-16: Radio-as-a-Service 4G LTE Network
ID-17: Real-time Prototyping of 5G Software Defined Networks using National Instruments SDR Platform and the NS3 Network Simulator
ID-18: RF DSP Inc.'s Massive MU-MIMO Development Platform
ID-19: Role of Biometric Systems to Improve Security and Performance in Big Data
ID-20: SDN-Based Security Enforcement in Mobile Networks using VNFs
ID-21: SDR Testbed for Carrier Frequency Offset Correction in Uplink Multi-user MIMO for Next-Generation WiFi
ID-22: Sub-Nyquist Systems

Industry Posters feature representatives from Samsung, Intel, Nokia, National Instruments, ABB, Mandat International, Egyptair, IPv6 Forum, TTP, Science & Research University and University of Bradford in lively discussions on the topics like Cloud Computing, IoT, 5G, IPv6, LTE, Wireless Communications and more.

Tuesday, 8 December • 14:00 – 18:00
IP-1: A Mobile Key Management Scheme for Mobile Wireless Sensor Networks
IP-2: Challenge in Cloud Computing to Enable the Future of IoT
IP-3: Coexistence and Resource Management Techniques for LTE on Unlicensed Spectrum
IP-4: Developing Network Topology and Beam Steering Algorithms for 5G mmWave Small Cells
IP-5: IPv6 and IoT Industrial Deployment
IP-6: Phase Balancing of Plug-in Hybrid Electric Vehicles with Wireless Communication in Smart Grid
IP-7: Protocol and Network Design for Low Latency Wireless Communications
IP-8: Prototyping Adaptive Multi GBit/s Access and Backhaul Links for for 5G mmWave Small Cells
IP-9: System Utilization Optimization Analysis of MapReduce/Hadoop
IP-10: The Internet of Sharks: Know what's in the water before diving in...

Industry Tutorials are half day lectures on current topics focused on near-term implementations in communications and networking.

Sunday, 6 December 2015 • 08:15 – 12:00
TIF-1: Databank Standardization and Tools toward Brain Communication
TIF-2: High Performance Random Access Schemes for Machine to Machine Applications: From Satellite to Terrestrial Networks

Sunday, 6 December 2015 • 14:00 – 17:00
TIF-3: Engineering Wireless Full-duplex Nodes
TIF-4: Towards 5G Internet of Things
TIF-5: Massive MIMO and FD-MIMO for LTE-Advanced and 5G

Thursday, 10 December 2015 • 08:15 – 12:00
TIF-6: Emerging Concepts and Technologies towards 5G+ Wireless
TIF-7: IP Tutorial
TIF-8: Rapid Prototyping of Real-Time Wireless Communication Systems with Software Defined Radio
TIF-9: Satellite Communications: Fundamentals, Configurations, Issues and Recent Developments

Thursday, 10 December 2015 • 14:00 – 17:00
TIF-10: Precision Time in Cyber Physical Systems
TIF-11: Ultra-Dense Small Cell Networks: Theory and Deployment
TIF-12: 5G New Waveforms
TIF-13: System-level Modeling of HetNets, Carrier Aggregation and Scheduling in MATLAB

Industry Workshops are in-depth half or full day programs on current topics targeting near-term implementations in communications, and include technical presentations, demonstrations, keynotes and panel discussions.

Sunday, 6 December 2015 • 08:15 – 17:00
WIF-1: Mobile Communication in High Frequency Bands
WIF-6: Next Generation WLAN and WPAN Technologies

Sunday, 6 December 2015 • 08:15 – 12:00
WIF-2: Workshop on 5G Security

Sunday, 6 December 2015 • 14:00 – 17:00
WIF-3: 5G Design and Test

Thursday, 10 December 2015 • 08:15 – 12:00
WIF-4: Vehicular Networks

Thursday, 10 December 10 2015 • 08:15 – 17:00
WIF-5: LTE to Unlicensed Bands

IEEE GLOBECOM 2015

— 22 —
BUSINESS PANELS

— 10 —
POSTER PRESENTATIONS

— 21 —
DEMONSTRATIONS

TECHNICAL PROGRAM

The Technical Program includes tutorials, workshops and a comprehensive symposia featuring oral and poster presentations grouped into 12 thematic symposia, and more than 15 parallel sessions. Specific presentations will target next generation research in device-to-device communications, self-organizing networks, green communications and computing, millimeter wave communications, content centric network design, vehicular networks, Internet security, video streaming, data storage, game theory, routing and reliability, and big data networking, among hundreds of other topics.

Technical Symposia features 949 peer-reviewed papers on current research and development organized into the following 12 Symposia consisting of 160 oral and interactive sessions.

AHSN: Ad Hoc and Sensor Networking Symposium
CogRN: Cognitive Radio & Wireless Networks Symposium
CISS: Communications and Information
  Systems Security Symposium
CQRM: Communications QoS, Reliability
  and Modeling Symposium
CSSM: Communications Software, Services
  and Multimedia Applications Symposium
CT: Communication Theory Symposium
NGN: Next-Generation Networking Symposium
ONS: Optical Networks and Systems Symposium
SAC-ANS: Selected Area – Access Networks and Systems
SAC-BDN: Selected Area – Big Data Networking
SAC-CC: Selected Area – Cloud Computing
SA-DS: Selected Area – Data Storage
SAC-EH: Selected Area – e-Health
SAC-GCC: Selected Area – Green
  Communications and Computing
SAC-IoT: Selected Area – Internet of Things
SAC-MBM: Selected Area – Molecular, Biological
  and Multi-scale Communications
SAC-P2P: Selected Area – P2P Networking
SAC-PLC: Selected Area – Powerline Communications
SAC-SSC: Selected Area – Satellite
  and Space Communications
SAC-SGC: Selected Area – Smart Grid Communications
SAC-SN: Selected Area – Social Networks
SAC-SDN: Selected Area – SDN & NFV
SPC: Signal Processing for Communications Symposium
WCS: Wireless Communications Symposium
WN: Wireless Networks Symposium

Monday, 7 December 2015 • 10:30 – 12:15
AHSN-1: Wireless Sensor Networks I
AHSN-2: Vehicular Networks I
CogRN-1: Spectrum Sensing in Cognitive Radio Networks I
CT-1: Communications with Energy Harvesting
NGN-1: Next Generation Wireless Network Design I
ONS-1: Visible Light Communications
SAC-SN-1: Community Enabled Networking
SAC-GCC2: Green Cellular Networks
SAC-GCC23: Green Communications and Computing I
SAC-IoT-25: Internet of Things I
SAC-P2P-27: P2P Networking I
SPC-1: Multi-Antenna Systems
WCS-1: Spatial Modulation and Multiplexing
WCS-2: Detection and Estimation for MIMO and OFDM
WCS-3: Device-to-Device Communications
WN-1: Architectural Design and Operation Models
WN-2: Self-Organizing Networks

Monday, 7 December 2015 • 14:00 – 15:45
AHSN-4: Wireless Sensor Networks II
CogRN-2: Spectrum Sensing in Cognitive Radio Networks II
CT-2: Coding Theory
I-1: Design and Next Generation Network I
  (Interactive Session)
NGN-2: Virtual Network Design
ONS-2: Optical Wireless Networks
SAC-GCC24: Green Communications and Computing II
SAC-IoT-26: Internet of Things II
SAC-P2P-28: P2P Networking II
SAC-MBM-3: Molecular, Biological and
  Multi-Scale Communications
SAC-IoT-4: Managing and Building New Internet
  of Things Applications
SPC-2: Wireless Information and Power Transfer
WCS-4: MIMO I

IEEE GLOBECOM 2015
949
PRESENTATIONS
12 THEMATIC SYMPOSIA

WCS-5: Millimeter Wave Communications I
WCS-6: Heterogeneous Networks I
WN-3: Power Management and Energy
  Conservation Techniques
WN-4: Cross-Layer Design and Optimization

Monday, 7 December 2015 • 16:15 – 18:00
AHSN-5: Vehicular Networks II
AHSN-6: Wireless Sensor Networks III
AHSN-I-2: Design and Next Generation Network II
  (Interactive Session)
CogRN-3: Spectrum Allocation and Resource
  Management in Cognitive Radio Networks I
CQRM-1: Cloud Computing and Networking
CT-3: PHY-Layer Advances in Communications
NGN-3: Content Centric Network Design
NGN-7: Routing
ONS-3: Optical Network Architectures and Design
SAC-CC-5: Evaluation of Data Center Network
  Topologies and Multipath Protocols

SAC-GCC-6: Green Clouds and Data Centers
SPC-3: Massive MIMO
WCS-7: Heterogeneous Networks II
WCS-8: MIMO II
WCS-9: Millimeter Wave Communications II
WN-5: Femtocell Networks
WN-6: Vehicular Networks

Tuesday, 8 December 2015 • 10:30 – 12:15
AHSN-7: Wireless Sensor Networks IV
CISS-8: Attacks: Detection and Prevention
CISS-11: Internet Security
CogRN-4: Spectrum Allocation and Resource
  Management in Cognitive Radio Networks II
CSSM-1: Video Coding and Communications
CT-4: Cooperative and Relay Communications I
NGN-4: Software Defined Network Design
ONS-4: Elastic Optical Networks
SAC-SN-7: Privacy, Security and Networking
SAC-GCC-8: Green Communications & Networking
SPC-4: Cooperative & Relayed Communications
WCS-10: Channel Coding
WCS-11: Caching in Wireless Communications
WCS-12: Communications Underwater
  and in Harsh Environments
WCS-13: Massive MIMO I
WCS-14: Multiple Access I
WN-7: Routing
WN-8: Performance Analysis and Optimization

Tuesday, 8 December 2015 • 14:00 – 15:45
AHSN-8: Delay Tolerant Networks and Crowdsensing
AHSN-9: Wireless Sensor Networks V
AHSN-I-3: Design and Next Generation Network III
  (Interactive Session)
CISS-9: Trust and Authentication
CISS-12: Wireless Security and Privacy
CogRN-5: Interference Issues in Cognitive
  Radio Networks
CQRM-2: Video Streaming
CSSM-2: Communication Services
CT-5: Cooperative and Relay Communications II
NGN-5: Next Generation Network Design
SAC-IoT-10: Extending the Internet of Things through
  Mobile Wireless Networks, RFID and Cloud Computing
SAC-CC-9: Mobile Cloud Networking
SPC-5: Energy-efficient Communications
WCS-15: Multiple Access II
WCS-16: Indoor Communications
WCS-17: Cloud RAN and Network Coordination
WCS-18: Massive MIMO II
WN-10: Heterogeneous Networks
WN-19: Wireless Networks
WN-9: Resource Allocation

Tuesday, 8 December 2015 • 16:15 – 18:00
AHSN-I-4: Design and Next Generation Network IV
  (Interactive Session)
CogRN-9: Cognitive Radios
CISS-10: Tools for Security Management
CSSM-3: Wireless Video
CT-6: MIMO and Massive MIMO Systems
NGN-6: Next Generation Wireless Network
ONS-5: Virtualization and RSA for WDM Networks
SAC-PLC-11: Power Line Communications
SAC-GCC-12: Green Wireless Networks I
SPC-6: Interference Management
WCS-19: Full-Duplex Communication

WCS-20: Physical-Layer Security
WCS-21: Detection, Estimation and Sampling
WCS-22: Massive MIMO III
WCS-23: Coordination in Wireless Communications
WCS-24: Relaying
WN-11: WLAN, WPAN, and Other Home/Personal
  Networking Technologies I
WN-12: Cellular Networks I
WN-17: Resource Management and Admission Control II

Wednesday, 9 December 2015 • 10:30 – 12:15
AHSN-10: Wireless Sensor Networks VI
AHSN-11: Localization and Tracking I
AHSN-14: Routing II
CISS-1: Cyber Security
CISS-2: Mobile Network Security
CISS-7: Security Metrics and Performance
CogRN-7: Security Issues in Cognitive Radio Networks
CQRM-3: Traffic Control and Network Virtualization
CQRM-6: Cellular Networks and 5G
CT-7: Communication System Performance
SAC-DS-13: Data Storage
SAC-GCC-14: Green Wireless Networks II
SPC-10: Beamforming
SPC-7: Estimation & Detection I
WCS-25: Resource Allocation
WN-14: Cellular Networks II

Wednesday, 9 December 2015 • 14:00 – 15:45
AHSN-12: Wireless Communications
AHSN-15: Security
CISS-3: Cryptography for Network Security
CISS-4: Physical Layer Security
CogRN-8: Game Theory in Cognitive Radio Networks
CQRM-4: Resource Allocation in Wireless Networks
CQRM-7: Performance Evaluation and QoE
CT-8: Cellular Networks
SAC-SSC-15: Satellite Networking
SAC-EH-16: e-Health Communications
SAC-SGC-17: Smart Grid Communications
SAC-ANS-21: Access Networks and Systems II
SAC-SDN-29: Software Defined Networking
  and Network Functions I
SPC-8: Estimation & Detection II
WCS-26: Wirelessly Powered Communication I
WN-16: Resource Management and Admission Control I

Wednesday, 9 December 2015 • 16:15 – 18:00
AHSN-13: Location and Tracking II
CISS-5: Cloud Network Security
CISS-6: Privacy Enhancing Technologies
CogRN-6: Performance Issues in Cognitive
  Radio Networks
CQRM-5: Scheduling, Routing and Reliability
CT-10: Modeling and Capacity of
  Communication Channels
CT-9: Fundamentals of Communication Networks
SAC-SS-18: Satellite Communications
SAC-CCS-19: Virtual Machine Migration and Allocation
SAC-ANS-20: Access Networks and Systems
SAC-BDN-22: Big Data Networking
SAC-SDN-30: Software Defined Networking
  and Network Functions II
SPC-9: Selected Topics in Signal Processing
  for Communications
WCS-27: Wirelessly Powered Communication II

WCS-28: 5G Waveforms, Architectures and Field Tests
WN-18: Wireless Computing and Scheduling

Technical Tutorials are half day lectures on current topics in communications and networking.

Sunday, 6 December 2015 • 08:15 – 12:00
TT-1: 5G Systems: Fundamentals, Technologies
  and Architectures
TT-2: Fog Network and Internet of Things (IoT)
  in Wireless 5G Environments
TT-3: Full-Duplex Communications and Networks:
  Fundamentals, Technologies and Applications
TT-4: Green Heterogeneous Wireless Networks

Sunday, 6 December 2015 • 14:00 – 17:00
TT-5: Designing Next Generation Energy Efficient
  Wireless Networks
TT-6: Stochastic Geometry for the Analysis and Design
  of 5G Cellular Networks
TT-7: OpenWSN & OpenMote: Open Source
  Industrial IoT
TT-8: Optical Wireless Communications
TT-9: Nanoscale, Molecular and Quantum
  Communications

Thursday, 10 December 2015 • 08:15 – 12:00
TT-10: 5G Tactile Internet: Application, Challenges
  and First Solutions
TT-11: Bayesian-inspired Non-convex Methods
  for Sparse Signal Recovery
TT-12: Empowering Future Networking Research and
  Experimentation through Software Defined Networking
TT-13: User-Provided Networks

Thursday, 10 December 2015 • 14:00 – 17:00
TT-14: Fundamental Limits of Robust
  Interference Management
TT-15: Hands-on Experimentation with Cognitive
  Radio Enabled Systems
TT-16: On the "Cloudification" of Mobile Core Networks
TT-17: Smart Cities and the Vehicular Cloud:
  Next Generation Vehicular Networking as a Primary
  Building Block

Technical Workshops are in-depth half or full day programs on the latest technical and business issues in communications and networking, and include a mix of regular papers, invited presentations and panel discussions.

Sunday, 6 December 2015 • 08:15 – 17:00
TW-1: 5G & Beyond: Enabling Technologies
  and Applications
TW-2: Cloud Computing Systems, Networks
  and Applications
TW-13: 5G Heterogeneous and Small Cell Networks

Sunday, 6 December 2015 • 08:15 – 12:00
TW-3: Internet of Things for Ambient Assisted Living
TW-4: Trusted Communications with
  Physical Layer Security
TW-5: Quantum Communications
  and Information Technology

TW-6: Millimeter-Wave Backhaul and Access:
  From Propagation to Prototyping
TW-7: Optical Wireless Communication
TW-15: Localization and Tracking: Indoors, Outdoors
  and Emerging Networks
TW-21: Green Standardization and Industry Issues
  for ICT and Relevant Technologies

Sunday, 6 December 2015 • 14:00 – 17:00
TW-8: Information Centric Network Solutions
  for Real-World Applications
TW-9: Massive MIMO: From Theory to Practice
TW-10: Security, Privacy, and Forensics in Wireless
  Mobile Ad Hoc Networks and Wireless Sensor
  Networks: First International
TW-11: SmartGrid Resilience
TW-12: Wireless Networking, Control & Positioning
  for Unmanned Autonomous Vehicles
TW-17: Networking and Collaboration Issues
  for the Internet of Everything

Thursday, 10 December 2015 • 08:15 – 17:00
TW-14: Emerging Technologies for 5G Wireless
  Cellular Networks

Thursday, 10 December 2015 • 08:15 – 12:00
TW-16: Enabling Technologies in Future Wireless
  Local Area Network
TW-18: Heterogeneous Carrier Communication
  Technologies

Thursday, 10 December 2015 • 14:00 – 17:00
TW-19: Advances in Software Defined Radio Access
  Networks and Context-aware Cognitive Networks
TW-20: Ultra-Low Latency and Ultra-High Reliability
  in Wireless Communications

IEEE GLOBECOM 2015

— 30 —
TUTORIALS

— 27 —
WORKSHOPS

IEEE COMSOC TRAINING

EMPOWER YOUR
WIRELESS EXPERTISE IN
3 DAYS

Monday-Wednesday, 7-9 December 2015

INTENSIVE WIRELESS COMMUNICATIONS ENGINEERING: CURRENT PRACTICES

Join us for a 3-Day in-person course, taught by Lee Vishloff (PEng, IEEE WCP). The course covers seven key areas in which every professional working in wireless should be proficient. Get up to date on RF Engineering, Propagation and Antennas; Wireless Access Technologies; Network and Service Architectures; Wireless Network Management and Security; Infrastructure and Wireless Communication; Agreements, Standards, Policies and Regulations; as well as your basic fundamental knowledge.

You will come away with:
- understanding of current practices in wireless communications
- deeper appreciation of wireless network management and security, including industry standards
- broadened knowledge of wireless access technologies

This course is not included in the conference registration fee.

Sign up or Learn More:
http://globecom2015.ieee-globecom.org/content/3-day-person-course

You will earn 20 IEEE CEU Credits
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#GLOBECOM

REGISTRATION & HOTELS

FULL and LIMITED TECHNICAL PROGRAM REGISTRATION (Does not include Tutorials or Workshops)	ON/BY 2 NOVEMBER	AFTER 2 NOVEMBER
RG-01 – Full IEEE ComSoc Member	US$935	US$1075
RG-02 – Full IEEE Member or Sister Society	US$970	US$1110
RG-03 – Full Non Member	US$1260	US$1445
RG-04 – Limited IEEE ComSoc Member	US$690	US$830
RG-05 – Limited IEEE Member or Sister Society	US$725	US$865
RG-06 – Limited Non Member	US$1015	US$1200
ONE DAY TECHNICAL PROGRAM REGISTRATION		
RG-07 – 1 Day IEEE ComSoc Member	US$485	US$580
RG-08 – 1 Day IEEE Member or Sister Society	US$520	US$615
RG-09 – 1 Day Non Member	US$730	US$850
OTHER REGISTRATIONS		
RG-10 – IEEE Life Member	US$50	US$50
RG-11 – IEEE Student Member (FULL TIME STUDENTS ONLY)	US$310	US$370
RG-12 – Student Non-Member	US$385	US$460
RG-13 – Workshop Only (2 Half or Full Day)	US$250	US$300
RG-14 – Tutorial Only – Students	US$50	US$75
RG-14 – Tutorial Only – Non-Students	US$100	US$150
INDUSTRY PROGRAM REGISTRATION		
RG-15 – Full 3 Day Industry Program (Does not include Tutorials or Workshops)	US$350	US$425
RG-16 – 1 Day Industry Program	US$200	US$250
RG-17 – IEEE Member: 3 Day In-Person Course	US$1350	US$1450
RG-18 – Non Member: 3 Day In-Person Course	US$1500	US$1600

Hilton San Diego Bayfront, conference headquarters hotel, will hold sessions, exhibits & some ComSoc committee meetings. Group rate is available through 12 November 2015.

Omni San Diego Hotel will hold most ComSoc committee meetings. Group rate is available through 5 November 2015.

REGISTER AT WWW.IEEE-GLOBECOM.ORG

Welcome | Keynote Speakers | Industry Program | Technical Program | 3 Day In-Person Course | Registration & Hotels