

General Chairs of 42nd Meeting

Nigel Jefferies



Dr. Nigel Jefferies is a senior standards manager with Huawei Technologies and Chairman of the Wireless World Research Forum, a global partnership between industry and academia to develop a research agenda for mobile communications. Previously he was Head of Academic Relationships within Vodafone Group Research & Development and a Principal Mathematician at Racal Research Ltd. In the past he led the European-funded IST project SHAMAN, which studied the security of future mobile systems, and ran the Secure Applications Steering Group for Mobile VCE. Other collaborative research projects on various aspects of security for mobile communications include 3GS3 in the UK-funded LINK programme, and ASPeCT and USECA in the European ACTS programme. His research interests include cryptography, security of systems and applications of mathematics to telecommunications. He received a PhD in functional analysis from Goldsmith's College, London, and an MA in mathematics from the Queen's College, Oxford, and is a visiting professor at Kingston University. He is a Fellow of the Institute of Mathematics and its Applications and a Chartered Mathematician.

Kohei Satoh



Dr. Kohei Satoh joined the Electrical Communication Laboratories, Nippon Telegraph and Telephone Public Corporation (NTT), Japan, in 1975, and transferred to NTT Mobile Communications Network, Inc. (NTT DOCOMO) in 1992. Since 1975, he has been engaged in the research on radio propagation for satellite communication systems, research and development of mobile satellite communications and mobile communications systems. After 1985, he has been also engaged in standardization activities of mobile satellite services in ITU-R and international alliance activities for IMT-2000. In July 2002, he moved from NTT DoCoMo to the Association of Radio Industries and Businesses (ARIB). He is now an Executive Manager on Standardization of ARIB, and his current job is to promote R&D and standardization activities for the 5th Generation Mobile Communications System. And, he is Chairman of APT Wireless Group and Secretary General of the 5th Generation Mobile Communications Promotion Forum (5GMF). Dr. Satoh is a member of the IEEE and the Institute of Electronics, Information, and Communication Engineers of Japan, and a Fellow of Wireless World Research Forum.

Special Sessions on Next Generation of Wireless Systems

Special Session - Key Innovations Beyond 5G Session 1

Hendrik Berndt



Since 2014 **Dr. Berndt** has dedicated himself to positions as Senior Advisor to worldwide partners in Asia, the Americas and Europe to contribute to solutions for the bigger global societal ICT challenges. He is advisor to the Association of Radio Industries and Businesses (ARIB) Japan and continuously appointed to support the European Commission for defining the next generation mobile system research directions. As a founder of the 2015 established International Institute for Innovation Aysén-Patagonia, he has been supporting sustainable natural resource exploitation, by applying IoT to develop solutions for environmental issues within the uniqueness of the region of Patagonia. He is board member of the IEEE ComSoc Industry Communities Board, vice chairing its 5G special interest group and member of the European Technology Platform NetWorld 2020 Expert Group. Berndt is

	<p>member of the Strategic Advisory Board of TOUCAN, a large research endeavors, funded by the UK's Engineering and Physical Sciences Research Council (EPSRC), From January 2001 until May 2014 Berndt held the position as Chief Technology Officer & Chief Science Officer of DOCOMO's Communications Laboratories in Europe. From 2000 to 2010 he has been teaching concurrently as Visiting Professor at the Global Information and Telecommunication Institute, Waseda University, Tokyo, Japan. Dr. Berndt was stationed from 1993 until end of 2000 in the USA, during these years he was working within Bellcore, Red Bank, NJ; as Executive Director of Advanced Technology for Global One in Reston, Virginia; as invited member of Sprint's Office of Network and Architecture Planning in Kansas and held the position as Chief Technology Officer of the TINA-C headquarters in New Jersey, USA.</p>
<p>Bernard Barani</p> 	<p>After 11 years as Communication engineer in industry and with the European Space Agency, Bernard Barani joined the European Commission in 1994 as program officer for research and policy issues in wireless communication. He is currently Deputy head of unit in the CONNECT Directorate General of the European Commission where he leads the definition and implementation of the 5G Public Private Partnership launched in 2013 by the EC to support 5G European R&D. His field of activities covers strategic R&D planning, standardisation, international cooperation, demonstration and pilot programmes. He is also involved in the implementation of the 5G Action Plan published by the Commission in 2016 to support 5G deployment in Europe. He is also vice chairman of the Steering committee of the EUCNC conference, the main showcasing event for telecom research sponsored by the EU programmes.</p>
<p>Alain Mourad</p> 	<p>Dr Alain Mourad is a Director Engineering R&D at InterDigital. He is currently leading the research and development of Next Generation Radio Access Networks (NG-RAN) at InterDigital International Labs (Europe and Asia). Prior to joining InterDigital, Dr. Mourad was a Principal Research Engineer at Samsung Electronics R&D (UK) and previously a Senior Research Engineer at Mitsubishi Electric R&D Centre Europe (France). He is a prolific inventor with over 50 issued patents and a thought leader with numerous publications. He received the Inventor of the Year Award from Samsung Electronics R&D in 2012 and 2013, InterDigital Innovation Awards in 2016 and 2018, and the 2018 Global Telecoms Awards "Highly Commended" in the category "Advancing the road to 5G".</p>
<p>Izzat Darwazeh</p>	<p>Professor Izzat Darwazeh is the founding Director of UCL's Institute of Communications and Connected Systems that, with over 100 members, is one of the largest of its kind in Europe. https://www.ucl.ac.uk/iccs/ . He is also the Chair of Communication Systems at UCL (since 2006) and heads the Information and Communications Engineering Research Group in the department of Electronic and Electrical Engineering.</p> <p>Professor Darwazeh's research areas are is in the fields of communication systems and high speed and mm wave circuit design. He has pioneered the development of new techniques for Optical and Wireless Communication Systems that have led to several world's first demonstrations, over 250 publications, 40 PhD supervisions and Chairmanship of major international conferences in UK, Europe and Asia. He has developed new modulation schemes termed Fast OFDM and Spectrally Efficient FDM, which are setting</p>



new paradigms for future communication systems. They challenge the orthodoxy of having orthogonal signals and can almost double the information carrying capacity of the system. A modification of the SEFDM technique is being considered for future optical fibre and wireless communications standards. He also led the university team that designed optical network components to be used in the new generation of the CERN accelerator. His work on band sampling techniques, developed a simple model for use in software defined radios that had impact on the way industry applied analogue to digital conversion in optical and wireless systems and has been cited by over 100 patents.

Professor Darwazeh led the taught postgraduate studies in the UCL Electronic and Electrical Engineering department from 2005 to 2019 and created specialist programmes in collaboration with industry specifically targeted at creating future leaders for the telecommunications industry and has been involved in the creation of several postgraduate programmes in Europe, Africa and the Middle East.

He is also co-author/editor of four text books¹ that are used by engineering undergraduates and researchers worldwide <https://www.amazon.com/Dr.-Izzat-Darwazeh/e/B017ITD1EW>

He is a consultant to major industries and organisations in the UK and abroad including regulators, venture capital and finance firms and legal firms and has acted as an expert witness in major international telecommunications patent litigation cases in the UK, Europe and USA.

**Special Session - Key Innovations Beyond 5G
Session 2**

Seiichi Sampei



Professor Seiichi Sampei received the B.E., M.E. and Ph.D. degrees in electrical engineering from Tokyo Institute of Technology, Japan, in 1980, 1982 and 1991, respectively. From 1982 to 1993, he was engaged in the development of adjacent channel interference rejection, fast fading compensation and M-ary QAM techniques for land-mobile communication systems, as a researcher in the Communications Research Laboratory, Ministry of Posts and Telecommunications, Japan.

In 1993, he joined the Faculty of Engineering, Osaka University, and he is currently a Professor in the department of Information and Communications Technology, Osaka University, where he has developed adaptive modulation, intelligent radio transmission/access, and cognitive wireless networking techniques.

He is a member of the Institute of Image Information and Television Engineers (ITE), and a Fellow of the IEEE and Institute of Electronics, Information and Communication Engineers (IEICE).

Session 3

Working Group Chair D

Angela Alexiou

Dr. Angeliki Alexiou received the Diploma in Electrical and Computer Engineering from the National Technical University of Athens in 1994 and the PhD in Electrical Engineering from Imperial College of Science, Technology and Medicine, University of London in 2000. Since May 2009 she is faculty

¹ <https://www.amazon.com/Dr.-Izzat-Darwazeh/e/B017ITD1EW>



member at the Department of Digital Systems, University of Piraeus, where she conducts research and teaches undergraduate and postgraduate courses in the area of Broadband Communications and Advanced Wireless Technologies. Prior to this appointment she was with Bell Laboratories, Wireless Research, Lucent Technologies, now Alcatel-Lucent, in Swindon, UK, first as a member of technical staff (January 1999-February 2006) and later as a Technical Manager (March 2006-April 2009). Prof Alexiou is a co-recipient of Bell Labs President's Gold Award in 2002 for contributions to Bell Labs Layered Space-Time (BLAST) project and the Central Bell Labs Teamwork Award in 2004 for role model teamwork and technical achievements in the IST FITNESS project. Prof Alexiou is the Chair of the Working Group on Radio Communication Technologies of the Wireless World Research Forum. She is a member of the IEEE and the Technical Chamber of Greece. Her current research interests include radio interface for 5G systems and beyond, MIMO and high frequencies (mmWave and THz wireless) technologies, cooperation, coordination and efficient resource management for Ultra Dense wireless networks and machine-to-machine communications, and 'cell-less' architectures based on softwarization, virtualization and extreme resources sharing. She is the project coordinator of the H2020 TERRANOVA project (ict-terranova.eu).

Mohamed-Slim Alouini



Prof Mohamed-Slim Alouini (S'94-M'98-SM'03-F'09) was born in Tunis, Tunisia. He received the Ph.D. degree in Electrical Engineering from the California Institute of Technology (Caltech), Pasadena, CA, USA, in 1998. He served as a faculty member in the University of Minnesota, Minneapolis, MN, USA, then in the Texas A&M University at Qatar, Education City, Doha, Qatar before joining King Abdullah University of Science and Technology (KAUST), Thuwal, Makkah Province, Saudi Arabia as a Professor of Electrical Engineering in 2009. His current research interests include the modeling, design, and performance analysis of wireless communication systems.

Working Group Chair: Connected Car

Seshadri Mohan



Prof Seshadri Mohan is currently a professor in Systems Engineering Department at University of Arkansas at Little Rock, where, from August 2004 to June 2013, he served as the Chair of the Department of Systems Engineering. Prior to the current position he served as the Chief Technology Officer (CTO) and Acting CEO of IP SerVoniX, where he consulted for several telecommunication firms and venture firms, and served as the CTO of Telsima (formerly known as Kinera).

Besides these positions, his industry experience spans a decade at New Jersey-based Telcordia (formerly Bellcore) and Bell Laboratories. Prior to joining Telcordia, he was an associate professor at Clarkson and Wayne State Universities. Dr. Mohan has authored/coauthored over 100 publications in the form of books, patents, and papers in refereed journals and conference proceedings with citations to his publications in excess of 5500. He has co-authored the textbook Source and Channel Coding: An Algorithmic Approach. He has contributed to several books, including Mobile Communications Handbook and The Communications Handbook (both CRC Press).

He holds fourteen patents in the area of wireless location management and authentication strategies as well as in the area of enhanced services for wireless. He is the recipient of the SAIC Publication Prize for Information and Communications Technology. He has served or is serving on the Editorial Boards of IEEE Personal Communications, IEEE Surveys, IEEE

Communications Magazine, Journal of Mobility and Cyber Security and International Journal on Wireless Personal Communications (Springer) and has chaired sessions in many international conferences and workshops. He has also served as a Guest Editor for several Special issues of IEEE Network, IEEE Communications Magazine, and ACM MONET. Currently, he serving as a co-guest editor of the Feature Topic “Human Bond Communications,” to appear in the February 2019 issue of IEEE Communications Magazine. He served as a guest editor of 2015 October IEEE Communications Feature Topic titled “Social Networks Meet Next Generation Mobile Multimedia Internet,” March 2012 IEEE Communications Feature Topic titled “Convergence of Applications Services in Next Generation Networks” as well as the June 2012 Feature Topic titled “Social Networks Meet Wireless Networks.” In April 2011, he was awarded 2010 IEEE Region 5 Outstanding Engineering Educator Award. He received the best paper award for the paper “A Multi-Path Routing Scheme for GMPLS-Controlled WDM Networks,” presented at the 4th IEEE Advanced Networks and Telecommunications Systems conference. Recently, Dr. Mohan co-founded the startup IntelliNexus, LLC, the objective of which is the development of innovative adhoc vehicular networking to advance the notion of connected cars and the development of IoT and IoV applications to improve traffic safety and reduce accidents and congestion. Dr. Mohan holds a Ph.D. degree in electrical and computer engineering from McMaster University, Canada, the Masters degree in electrical engineering from the Indian Institute of Technology, Kanpur, India, and the Bachelors degree in Electronics and Telecommunications from the University of Madras, India.

Working Group Chair: A/B

Knud Erik Skouby



Prof Knud Erik Skouby is professor and founding director of center for Communication, Media and Information technologies, Aalborg University-Copenhagen - a center providing a focal point for multi-disciplinary research and training in applications of CMI. Has a career as a university teacher and within consultancy since 1972. Working areas: Techno-economic Analyses; Development of mobile/ wireless applications and services: Regulation of telecommunications. Project manager and partner in a number of international, European and Danish research projects. Served on a number of public committees within telecom, IT and broadcasting; as a member of boards of professional societies; as a member of organizing boards, evaluation committees and as invited speaker on international conferences; published a number of Danish and international articles, books and conference proceedings. Editor in chief of Nordic and Baltic Journal of Information and Communication Technologies (NBICT); Board member of the Danish Media Committee. Chair of WGA in Wireless World Research Forum; Dep. chair IEEE Denmark. Member of the Academic Council of the Faculty of Engineering and Science, AAU.

Working Group Chair: C

Sudhir Dixit

Dr. Sudhir Dixit is a Senior Fellow and Evangelist of Basic Internet at the Basic Internet Foundation and heads its US operations. He is also a Board Member & Working Group Chair at the Wireless World Research Forum (WWRF). From 2015 to 2017 he was the CEO and Co-Founder of a start-up, Skydoot, Inc, in the cloud-based and collaboration space. From December 2013 to April 2015, he was a Distinguished Chief Technologist and CTO of the Communications and Media Services for the Americas Region of Hewlett-Packard Enterprise Services in Palo Alto, CA, and prior to this he was the Director of Hewlett-



Packard Labs India from September 2009. From June 2009 to August 2009, he was a Director at HP Labs in Palo Alto. Before joining HP, he held various leadership positions at BlackBerry, Nokia, NSN and Verizon Communications. Sudhir Dixit has 21 patents granted by the US PTO and has published over 200 papers and edited, co-edited, or authored eight books by Wiley, Springer and Artech House. He has been a technical editor of IEEE Communications Magazine, and is presently on the editorial boards of IEEE Spectrum Magazine, Cambridge University Press Wireless Series and Springer's Wireless Personal Communications Journal. From 2010 to 2012, he was an Adjunct Professor of Computer Science at the University of California, Davis, and, since 2010, he has been a Docent of Broadband Mobile Communications for Emerging Economies at the University of Oulu, Finland. A Life Fellow of the IEEE, Fellow of IET and IETE, Dixit holds a Ph.D. from the University of Strathclyde, Glasgow, U.K. and an M.B.A. from the Florida Institute of Technology, Melbourne, Florida.