

# Networking Challenges for Future Services

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Panel

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Organizer: Roberto de Marca, CETUC/Rio, Brazil

Chair: Abbas Jamalipour, University of Sydney, Australia

Services and applications have always been the driving wheel for the development of new technologies and in both wireless and wired networks. Requirements of fast connections and high data rates initiated the development of 3G, HSPA, LTE, and finally 4G networks in recent years. Similarly, for the wired network, small home and office with the requirement of fast and reliable Internet access initiated ADSL, wireless, optical, and hybrid versions of access networks. These days we see multiple networks with different technologies and access protocols need to work with each other to provide a global network catering a wide range of services and applications in a heterogeneous configuration. Networking all these technologies requires sophisticated topologies, protocols, and management techniques in order to achieve the best out of the capabilities of the available and emerging access technologies. Such networking solutions are also required for some emerging technologies such as the smart grid and the universal monitoring sensor networks.

This panel brings together the ideas from the experts in the field of networking from across the world with a mixed background and experience from years of working in industry and academia. The panel also discusses the problems and possible solutions to the shortcomings of the current networking technologies and whether they are ready to support the ever-increasing future

Internet traffic load and bandwidth-demanding services and applications.

Panelists:

- Matti Latva-aho, Professor of Digital Transmission Techniques, University of Oulu, Finland
- J.J. Garcia-Luna-Aceves, Jack Baskin Chair of Computer Engineering, University of California, Santa Cruz (UCSC), USA
- James P.G. Sterbenz, Professor, University of Kansas, USA
- Abbas Jamalipour, Professor of Ubiquitous Mobile Networking, University of Sydney, Australia

Biographies:

Matti Latva-aho, University of Oulu, Finland

Matti Latva-aho is currently Professor of Digital Transmission Techniques and Head of Telecommunication Laboratory at the University of Oulu. Prof. Latva-aho was Director of Centre for Wireless Communications at the University of Oulu during the years 1998-2006. His major research interests include future broadband wireless communication systems, access networks optimization and future wireless networking architectures. Prof. Latva-aho has published more than 200 conference or journal papers in the field of wireless communications. He has been TPC Chairman for PIMRC'06, TPC Co-Chairman for ChinaCom'07 and General Chairman for WPMC'08. He acted as the Chairman and vice-chairman for IEEE Communications Finland Chapter in 2000 - 2003.

J.J. Garcia-Luna-Aceves, University of California, Santa Cruz (UCSC), USA

J.J. Garcia-Luna-Aceves holds the Jack Baskin Chair of Computer Engineering at the University of California, Santa Cruz (UCSC), is Chair of the Computer Engineering Department, and is a Principal Scientist at the Palo Alto Research Center (PARC). He is an IEEE Fellow, an ACM Fellow, and a AAAS Fellow. He received the Technical Achievement Award from the IEEE Computer Society in 2011 for pioneering contributions to the theory and design of communication protocols for ad-hoc wireless networks. He is the co-recipient of the IEEE Fred W. Ellersick 2008 MILCOM Award for Best Unclassified Paper. He is also the co-recipient of Best Paper Awards at the IEEE MASS 2008, SPECTS 2007, IFIP Networking 2007, and IEEE MASS 2005 conferences; and of the Best Student Paper Award of the 1998 IEEE International Conference on Systems, Man, and Cybernetics. He has been General Chair of the ACM Mobicom 2008 Conference; General Chair of the IEEE SECON 2005 Conference; Program Co-Chair of ACM MobiHoc 2002 and ACM Mobicom 2000; Chair of the ACM SIG Multimedia; General Chair of ACM Multimedia '93 and ACM SIGCOMM '88; and Program Chair of IEEE MULTIMEDIA '92, ACM SIGCOMM '87, and ACM SIGCOMM '86.

James P.G. Sterbenz, University of Kansas, USA

James P.G. Sterbenz is Associate Professor of Electrical Engineering & Computer Science and on staff at the Information & Telecommunication Technology Center at the University of Kansas,

US, and is a Visiting Professor of Computing in InfoLab 21 at Lancaster University in the UK. He has previously held senior staff and research management positions at BBN Technologies, GTE Laboratories, and IBM Research. His research interests include resilient, survivable, and disruption tolerant networking, future Internet architectures, active and programmable networks, and high-speed networking and components. He is currently in the NSF-funded FIND and GENI programs, the EU-funded FIRE ResumeNet project, and leads the GpENI programmable network test-bed project. He received a doctorate in computer science from Washington University in 1991. He has been program chair for IEEE GI, GBN, and HotI; IFIP IWSOS, PfHSN, and IWAN; and is on the editorial board of IEEE Network. He is principal author of the book High-Speed Networking: A Systematic Approach to High-Bandwidth Low-Latency Communication.

Abbas Jamalipour, University of Sydney, Australia

Abbas Jamalipour is a Fellow of IEEE, IEICE, and IEAust, an ACM Professional Member, and an IEEE Distinguished Lecturer. He is the Professor of Ubiquitous Mobile Networking at the University of Sydney and holds a PhD in Electrical Engineering from Nagoya University, Japan. He is the author of five technical books, nine book chapters, and over 250 technical papers in the area of wireless communications. He was the Editor-in-Chief IEEE Wireless Communications and currently he is an editor for several scholarly journals. He is the Chair of the Communication Switching and Routing TC, Vice Director of Asia Pacific Board, and a Past Chair of Satellite and Space Communications TC, ComSoc. He was the General Chair IEEE WCNC2010, and has been a chair for a number of conferences including IEEE ICC, GLOBECOM, WCNC and PIMRC. Abbas is a voting member of ComSoc's Education Board, Conference Boards, and On-Line Contents Board and was Member-at-Large GITC 2006-2010. He received several prestigious awards such as the 2010 IEEE ComSoc Harold Sobol Award, 2006 IEEE ComSoc Distinguished Contribution to Satellite Communications Award, and 2006 IEEE ComSoc Best Tutorial Paper Award.

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