

# Wireless Green Networking

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Panel

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**Organizer:**

- Marco Ajmone Marsan. Politecnico di Torino (Italy) and Institute IMDEA Networks (Spain)

The cost of the energy required to power the base stations of a wireless access network has become the largest component of the mobile network operator's OPEX. This fact is motivating manufacturers to develop new lines of low-power equipment, and networking researchers to investigate approaches for the reduction of the network energy consumption. This panel will discuss the main issues and challenges in the area of wireless green networking, with the contribution of academic and industrial researchers from the US, Europe, and China.

**Panelists:**

- Suresh Goyal - Alcatel Lucent Bell Labs, USA
- Shugong Xu - Huawei, China
- Mario Pickavet - IBBT, Belgium

**Bios:**

[Suresh Goyal - Alcatel Lucent Bell Labs, USA](#)

Dr. Suresh Goyal heads the Green Research theme at Bell Labs involving cross-domain research on sustainable networks and energy-efficiency enablement. Bell Labs' green research involves more than fifty researchers and a large number of external collaborators. A center point of Bell Labs' green research is GreenTouchR. GreenTouchR is a global research consortium, formed under the leadership of Bell Labs, with the goal of inventing sustainable, ultra-energy-efficient, ICT networks. Suresh led the Bell Labs research teams that performed the analyses leading to the formation of GreenTouchR.

Suresh also holds an Adjunct Professor position at the University of Limerick, in Limerick, Ireland, with a research focus on mechanics and energy harvesting. He is a founding member of Bell Labs Ireland, and the Center for Telecommunications Value Chain Research (CTVR), where he co-led strategy development, and led the Test and Reliability research group, for 5 years. He has previously held positions in optical networking research and wireless packaging research in Bell Labs. Suresh also served as Adjunct Professor at Carnegie-Mellon University, in Pittsburgh, PA.

Suresh obtained his PhD from Cornell University, in Ithaca, NY, an MS from the University of Iowa, in Iowa City, IA, and a B.Tech from the Indian Institute of Technology, Kharagpur, India. He is a Fellow of the ASME. He has more than 70 peer-reviewed publications, 12 patents, 3 Best Paper awards, and several Internal Bell Labs awards. Suresh has co-supervised 3 PhD students, 2 Master's students, and mentored several Senior researchers and students.

On behalf of the Alcatel-Lucent Foundation, and its predecessors before, Suresh has been on Boards and committees for mentoring and awarding Fellowships for higher education to under-represented minorities, and for Science education reform.

#### Shugong Xu - Huawei, China

Shugong Xu received his PhD from Huazhong University of Science and Technology (HUST), China in 1996. He is currently the Director of Access Network Technology Research Department, a Principal Scientist & Vice Director of Communication Lab, Huawei Corporate Research, and Chief Scientist on Wireless Access Technologies in the National Key Lab on Wireless Technologies at Huawei. He leads the Green communication research in Huawei, including the Green Radio project GREAT, which focuses on power efficient solutions for wireless radio access networks. Prior of joining Huawei, he was with Sharp Labs of American, Camas WA for 7 year and a few years in academic universities including Tsinghua University and the City College of New York (CCNY). His research interests include wireless/mobile networking and communication, home networking and multimedia communications. He published more than 30 peer-reviewed research papers as lead-author in top international conferences and journals, in which the most referenced one has over 850 Google Scholar citations. He holds more than 30 granted US patents or patent applications, of which technologies have been adopted in WiFi and LTE standards. Dr. Xu is a senior member of IEEE, and Technical Committee co-chair of Green Touch consortium.

#### Mario Pickavet - IBBT, Belgium

Mario Pickavet received an M.Sc. and Ph.D. degree in electrical engineering, specialized in telecommunications, from Ghent University in 1996 and 1999, respectively. Since 2000, he is professor at Ghent University where he is teaching courses on discrete mathematics, multimedia networks and network modeling. His current research interests are related to broadband communication networks (WDM, IP, (G-)MPLS, Ethernet, OPS, OBS) and include design, long-term planning, techno-economical analysis and energy efficiency of core and access networks. Special attention goes to Operations Research techniques that can be applied for routing and network design. In this context, he is currently involved in several European and national projects, such as the Network of Excellence "Building the Future Optical Network in Europe" (BONE), DICONET, ECODE, ALPHA, SPARC, TREND and OASE. He has published about 200 international publications, both in journals and in proceedings of conferences. He is co-author of the book 'Network Recovery: Protection and Restoration of Optical, SONET-SDH, IP, and MPLS'.

**Authors:**

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