
FOREWORD

Special Section on European ICT R&D Project Activities on Broadband Access Technologies in Conjunction with Main Topics of 2015 IEICE ICT Forum

The ongoing development of broadband services, common access to Internet resources and the dynamic growth of the Internet of Things impose upon researchers and engineers intensive work on devising new network technologies and services, and studying their influence on society.

The aim of this Special Section on European ICT R&D Project Activities on Broadband Access Technologies in Conjunction with Main Topics of 2015 IEICE ICT Forum was to present recent advances in research on wireless cellular networks, optical communication, resource management, routing and analytical modelling and performance evaluation of multiservice networks.

The Section contains two invited papers and six technical/regular papers selected from 13 submissions after strict review process. The first invited paper “Queueing systems for the Internet” provides a review of current trends in modelling multi-service communication networks servicing elastic traffic streams. The author, Maciej Stasiak, proposes also a new method for determining basic characteristics of multi-service queueing systems. The analytical model is accompanied by a few numerical examples.

The other invited paper discusses the technologies, problems and prospective applications of Free Space Optics (FSO) and mmWave communications. The authors, Tawfik Ismail, Erich Leitgeb and Thomas Plank, pay special attention to the possible sources of interference in FSO communications and the possible techniques of their mitigation. At the same time, they pose questions that might encourage further research on mmWave and FSO technologies.

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Mariusz Głąbowski, Guest Editor-in-Chief

Mariusz Głąbowski (*Senior Member*) received the M.Sc., Ph.D. and D.Sc. (Habilitation) degrees in telecommunication from the Poznan University of Technology, Poland, in 1997, 2001, and 2010, respectively. Since 1997 he has been working in the Department of Electronics and Telecommunications, Poznan University of Technology. He is engaged in research in the area of performance analysis and modelling of multiservice networks and switching systems. Mariusz Głąbowski is senior member of the IEICE and IEEE. Currently, he is a chair of IEICE Europe Section.

