FOREWORD

Special Section on New/Next Generation Photonic Networking and Future Networks

Lots of innovative researches for New Generation Network (NwGN) and the Future Internet (FI) are ongoing for clean-slate redesign of the current architectures. On the contrary, innovative networking technologies are emerging, e.g. optical path/packet switching, photonic routers, and collaboration/fusion among high speed networks and “cloud”, among others. It is strongly expected that NwGN and FI are designed to accommodate a lot more diverse network applications, utilizing high performance of photonic network infrastructure very efficiently.

Taking this situation into account, this special section was planned to discuss new visions, ideas, and results of research and development of New Generation Photonic Networking and Future Networks, in a wider range of research communities. We invited three excellent papers that describe cutting-edge research results in the area. A category “position paper” for describing mainly innovative ideas was specially set up in this special section though it is handled and published as regular letter category. We received 17 submissions other than the invited papers: 8 regular papers, 6 position papers, and 3 regular letters. After careful and thorough reviews by the experts, this special section contains 3 regular papers and one position paper (although it is categorized as a letter according to the current IEICE policy), in addition to the invited papers, that cover various important technical contributions.

The editorial committee believes that this special section is valuable and fruitful for readers, and encourages further research, development and deployment activities. On behalf of the editorial committee, I would like to express our sincere appreciation to all the authors for submitting papers, and reviewers for their great efforts and contributions.

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Masayuki Murata (Fellow) received the M.E. and D.E. degrees in Information and Computer Science from Osaka University, Japan, in 1984 and 1988, respectively. In April 1984, he joined Tokyo Research Laboratory, IBM Japan, as a Researcher. After moving Osaka University in September 1987 to January 1989, he became a Professor of Cybermedia Center, Osaka University, in April 1999, and is now with Graduate School of Information Science and Technology, Osaka University since April 2004. He is also partly working at NICT (National Institute of Information and Communications Technology) as a R&D advisor. His research interests include computer communication architecture and performance modeling and evaluation. He is a member of IEEE and ACM.