

Preface

Welcome to the sixth International Workshop on Signal Design and Its Applications in Communications (IWSDA'13) held in Tokyo, Japan, between October 27 to November 1, 2013. The first IWSDA was held in September 2001 in Chengdu, China, the second in Yamaguchi, Japan in October 2005, the third in Chengdu again in September 2007, the fourth in Fukuoka, Japan in October 2009, and the fifth in Guilin, China in October 2011. It is well-known that discrete signal design plays a very important role in widespread applications, such as spread spectrum, code division multiple access, positioning, channel estimations, synchronization, optimal detections, etc. The aim of this workshop is to foster fruitful interactions among signal designers, coding theorists, cryptographic researchers and communications practitioners from all over the world. This volume contains the refereed proceedings of the IWSDA'13.

Through a careful review process, where each submitted manuscript was reviewed by at least two program committee members or their external referees, the program committee accepted 45 papers (all for oral presentation), together with 3 plenary speeches, which are all included in the proceedings. The papers in the proceedings are organized into 12 categories: Plenary Speeches, Signal Design for Communications, Sequences/Codes on Finite Fields, Optical Codes/Optical Communications, Mathematical Theory/Analysis of Sequences, ZCZ sequences and Applications, Network, Security, OFDM, Communications, Frequency Hopping Sequences, Other Optimal Sequences and Applications.

We are very pleased to have three outstanding researchers to deliver plenary addresses at the conference: “Sequences, Randomness and Security” by Prof. Serdar Boztas (RMIT University, Australia), “On Large Zero Auto/Cross Correlation Zone of Golay/QAM Golay Sequences and Their Applications and Related Correlation Properties” by Prof. Guang Gong (University of Waterloo, Canada), “Difference Sets, Sequences, and Multipliers” by Prof. Alexander Pott (Otto-von-Guericke-University, Germany). We wish to thank the plenary speakers for providing their valuable time to the workshop.

We are indebted to our sponsors, patrons and supporters, including IEEE, ESS IEICE, National Natural Science Foundation of China (NSFC No.61032002), Ministry of Science & Technology (MoST 973 Program No.2012CB316100), Tokyo National College of Technology, Japan, Yamaguchi University, Japan and Southwest Jiaotong University (SWJTU), China. The conference is also partially supported by the Ministry of Education (MoE No.311031) and the 111 project (No.111-2-14).

We would like to express our thanks to all the authors who submitted their papers for consideration, all the Technical Program Committee members and external referees for their help in the paper reviewing process. We would also like to acknowledge Hongyu Zhao, Zhengchun Zhou and Yang Yang, as publication co-chairs, for their efforts in communicating with IEEE conference operations, as well as efficiently dealing with the publication of this proceedings (printed and electronic version), Sadanobu Yoshimoto for his excellent service in publicizing the conference, Takao Maeda for his diligent job as the conference treasurer, and local volunteers in Tokyo for their great effort and time in making this conference successful.

Finally, we wish to thank all authors and attendees for participating in the conference. We hope that you will find your participation in this conference rewarding and your stay in Tokyo enjoyable.

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October 2013