
FOREWORD

Special Section on Acoustic Scene Analysis and Reproduction

We are surrounded by sounds in our daily lives. To achieve a rich acoustic environment for the next generation, acoustical scene analysis and reproduction technologies are essential. The acoustic scene can be analyzed with cutting edge techniques such as source localization, source separation, dereverberation, noise reduction, and it can be reproduced by employing virtual acoustics via loudspeakers or headphones. These techniques form the core of the state-of-the-art acoustic signal processing and are indispensable to the realization of future communication via for both man-machine and human-human interfaces.

This special section is dedicated to recent advances in acoustic scene analysis and reproduction technologies. The aim of this special section is to offer an opportunity to link these techniques in different areas and to find effective ways of achieving our goals. This special section represents a vehicle whereby researchers can present new studies, thus paving the way for future developments in the field. I hope that this special section will stimulate interest in the challenging area of acoustic scene analysis and reproduction, and look forward to seeing an increasing body of high-quality research aligned with this idea.

I would like to express my gratitude to the authors of the papers in this special section, and also to the reviewers who provided detailed and insightful reviews and comments within the tight deadlines given. I also appreciate the guest editors for their editorial efforts in spite of a limited time due to the tight schedule for the special section. My special thanks go to Professor Yoshifumi Chisaki for his careful and excellent secretarial work.

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Shoji Makino, Guest Editor

Shoji Makino (*Fellow*) received B.E., M.E., and Ph.D. degrees from Tohoku University, Sendai, Japan, in 1979, 1981, and 1993, respectively. He joined NTT in 1981. He is now an Executive Manager of NTT Communication Science Laboratories. He is also a Guest Professor at Hokkaido University. His research interests include the blind source separation of convolutive mixtures of speech, and acoustic signal processing for speech and audio applications. He received the ICA Unsupervised Learning Pioneer Award in 2006, the Paper Award of the IEICE in 2005 and 2002, the Paper Award of the Acoustical Society of Japan in 2005 and 2002, the TELECOM System Technology Award of the Telecommunications Advancement Foundation in 2004, the Achievement Award of the IEICE in 1997, and the Outstanding Technological Development Award of the Acoustical Society of Japan in 1995. He is the author or co-author of more than 200 articles in journals and conference proceedings and is responsible for more than 150 patents. He is a Tutorial speaker at ICASSP2007. He was an Associate Editor of the IEEE Transactions on Speech and Audio Processing. He is a member of the Technical Committee on Audio and Electroacoustics of the IEEE Signal Processing Society and the Chair-Elect of the Technical Committee on Blind Signal Processing of the IEEE Circuits and Systems Society. He is the Chair of the Technical Committee on Engineering Acoustics of the IEICE. He is the General Chair of the IEEE WASPAA2007, the General Chair of the IWAENC2003, and the Organizing Chair of the ICA2003. He is an IEEE Fellow, council member of the Acoustical Society of Japan, and a member of EURASIP.

