



Tentative Programme Schedule

IWAENC 2014			
08/09/2014	09/09/2014	10/09/2014	11/09/2014
	08:30 - 09:00 Registration 09:00 - 09:15 Welcome Address 09:15 - 10:00 Plenary 1 10:00 - 10:45 Plenary 2 Coffee Break 11:00 - 12:30 Poster Session 1/Demo Session 1 12:30 - 14:30 Lunch Break 14:30 - 15:15 Plenary 3 15:15 - 16:00 Research and development at NXP Software Coffee Break 16:15 - 17:30 Poster session 2/Demo session 2 17:30 - 17:45 Group Photo	09:00 - 10:20 Selected papers Coffee Break 10:40 - 12:00 Poster Session 3/Demo session 3 12:00 - 14:00 Lunch Break/Technical Committee meeting 14:00 - 18:00 Social Event	09:00 - 09:45 Plenary 4 09:45 - 11:00 Poster Session 4/Demo Session 4 Coffee Break 11:15 - 12:30 Poster Session 5/Demo Session 5 12:30 - 14:30 Lunch Break 14:30 - 15:15 Plenary 5 15:15 - 16:45 Poster Session 6/Demo session 6/ Coffee break 16:45 - 17:00 Closing Address / Best paper Award
18:30 - 21:00 Registration 19:00 - 21:00 Welcome Reception		19:00 - 23:00 Banquet	

Poster Session 1

Tuesday, September 9, 2014, 11.00 - 12.30

HMM-Based Artificial Bandwidth Extension Supported by Neural Networks

Patrick Bauer (Technische Universität Braunschweig, Germany); Johannes Abel (Technische Universität Braunschweig, Germany); Tim Fingscheidt (Technische Universität Braunschweig, Germany)

Unbiased Coherent-to-Diffuse Ratio Estimation for Dereverberation

Andreas Schwarz (University of Erlangen-Nuremberg, Germany); Walter Kellermann (University Erlangen-Nuremberg, Germany)

A Posteriori Speech Presence Probability Estimation Based on Averaged Observations and a Super-Gaussian Speech Model

Balazs Fodor (Technische Universität Braunschweig, Germany); Timo Gerkmann (University of Oldenburg, Germany)

An Adaptive Microphone Array Topology For Target Signal Extraction With Humanoid Robots

Hendrik Barfuss (University of Erlangen-Nuremberg, Germany); Walter Kellermann (University Erlangen-Nuremberg, Germany)

On the Statistics and the Detection of Multichannel Common Zeros

Gerald Enzner (Ruhr-University Bochum, Germany); Philipp Thüne (Ruhr-University Bochum, Germany)

The ABCIT Research Platform

Kamil Adiloğlu (HörTech gGmbH, Germany); Tobias Herzke (HoerTech Oldenburg, Germany); Volker Hohmann (Carl von Ossietzky-Universität Oldenburg, Germany); Matthieu Recugnat (Oticon Medical, France); Martin Besnard (Oticon Medical, France); Teng Huang (Oticon Medical, France); Bradford Backus (Oticon Medical, France)

LPC-based speech dereverberation using Kalman-EM algorithm

Boaz Schwartz (Bar-Ilan University, Israel); Sharon Gannot (Bar-Ilan University, Israel); Emanuël Habets (International Audio Laboratories Erlangen, Germany)

Post-filter design for speech enhancement in various noisy environments

Kenta Niwa (NTT Media Intelligence Laboratories, Japan); Yusuke Hioka (University of Canterbury, New Zealand); Kazunori Kobayashi (NTT Media Intelligence Laboratories, Japan)

The Single- and Multichannel Audio Recordings Database (SMARD)

Jesper Kjær Nielsen (Aalborg University, Denmark); Jesper Rindom Jensen (Aalborg University, Denmark); Søren Holdt Jensen (Aalborg University, Denmark); Mads Græsbøll Christensen (Aalborg University, Denmark)

Estimation of the Common Part of Acoustic Feedback Paths in Hearing Aids using Iterative Quadratic Programming

Henning Schepker (University of Oldenburg, Germany); Simon Doclo (University of Oldenburg, Germany)

Speech dereverberation with convolutive transfer function approximation using MAP and variational deconvolution approaches

Ante Jukić (University of Oldenburg, Germany); Toon van Waterschoot (KU Leuven, Belgium); Timo Gerkmann (University of Oldenburg, Germany); Simon Doclo (University of Oldenburg, Germany)

Poster Session 2

Tuesday, September 9, 2014, 16.15 - 17.30

An improved non-intrusive intelligibility metric for noisy and reverberant speech

João Felipe Santos (INRS-EMT, Canada); Mohammed Senoussaoui (INRS, Canada); Tiago Falk (INRS-EMT, Canada)

Wave-domain canceling of residual echo with subspace tracking

Satoru Emura (NTT, Japan)

A robust howling detection algorithm based on a statistical approach

Joachim Flocon-Cholet (Orange Labs, France); Julien Faure (Orange Labs, France); Alexandre Guérin (Orange Labs, France); Pascal Scalart (University of Rennes, France)

Sinusoidal Interpolation Across Missing Data

W. Bastiaan Kleijn (Victoria University of Wellington, New Zealand); Turaj Shabestary (Google, USA); Jan Skoglund (Google, Inc., USA)

Optimal Beamforming as a Time Domain Equalization Problem with Application to Room Acoustics

Mark R. P. Thomas (Microsoft Research, USA); Felicia Lim (Imperial College London, United Kingdom); Ivan J. Tashev (Microsoft Research, USA); Patrick A Naylor (Imperial College London, United Kingdom)

Speaker Dependent Speech Enhancement Using Sinusoidal Model

Pejman Mowlae (Graz University of Technology (TU Graz), Austria); Christian Nachbar (Graz University of Technology, Austria)

PSD estimation in beamspace for source separation in a diffuse noise field

Yusuke Hioka (University of Canterbury, New Zealand); Kenta Niwa (NTT Media Intelligence Laboratories, Japan)

Speech Reinforcement with a Globally Optimized Perceptual Distortion Measure for Noisy Reverberant Channels

João Crespo (Delft University of Technology, The Netherlands); Richard Hendriks (Delft University of Technology, The Netherlands)

On near-field beamforming with smartphone based ad-hoc microphone arrays

Nikolay D. Gaubitch (Delft University of Technology, The Netherlands); Jorge Martinez (Delft University of Technology, The Netherlands); W. Bastiaan Kleijn (Victoria University of Wellington, New Zealand); Richard Heusdens (Delft University of Technology, The Netherlands)

A discriminative learning approach to probabilistic acoustic source localization

Hendrik Kayser (University of Oldenburg, Germany); Joern Anemueller (University of Oldenburg, Germany)

Estimation of Time-variant Acoustic Feedback Paths in In-Car Communication Systems

Jochen Withopf (Christian-Albrechts-Universität zu Kiel, Germany); Gerhard Schmidt (CAU Kiel, Germany)

Selected Papers

Wednesday, September 10, 2014, 9.00 - 10.20

An Acoustical Zoom Based on Informed Spatial Filtering

Oliver Thiergart (International Audio Laboratories Erlangen, Germany); Konrad Kowalczyk (Fraunhofer Institute for Integrated Circuits IIS, Germany); Emanuël Habets (International Audio Laboratories Erlangen, Germany)

Identification of Surface Acoustic Impedances in a Reverberant Room Using the FDTD Method

Niccolò Antonello (KU Leuven, Belgium); Toon van Waterschoot (KU Leuven, Belgium); Marc Moonen (KU Leuven, Belgium); Patrick A Naylor (Imperial College London, United Kingdom)

Statistical Modelling of Multichannel Blind System Identification Errors

Felicia Lim (Imperial College London, United Kingdom); Patrick A Naylor (Imperial College London, United Kingdom)

Multichannel dereverberation for hearing aids with interaural coherence preservation

Sebastian Braun (International Audio Laboratories Erlangen, Germany); Matteo Torcoli (International Audio Laboratories Erlangen, Germany); Daniel Marquardt (University of Oldenburg, Germany); Emanuel Habets (International Audio Laboratories Erlangen, Germany); Simon Doclo (University of Oldenburg, Germany)

Poster session 3

Wednesday, September 10, 2014, 10.40 - 12.00

Spatial Perception of Virtual X-Y Recordings

Konrad Kowalczyk (Fraunhofer Institute for Integrated Circuits IIS, Germany); Alexandra Craciun (International Audio Laboratories Erlangen, Germany); Christian Dachmann (Fraunhofer IIS, Germany); Emanuel Habets (International Audio Laboratories Erlangen, Germany)

Characterisation and modelling of non-linear loudspeakers

Leela Gudupudi (EURECOM, France); Christophe Beaugeant (Intel, France); Nicholas Evans (EURECOM, France)

Joint Dereverberation and Noise Reduction Based on Acoustic Multichannel Equalization

Ina Kodrasi (University of Oldenburg, Germany); Simon Doclo (University of Oldenburg, Germany)

A Wind-Noise Suppressor Based on Wind-Onset Detection and Spectral Gain Modification

Masanori Kato (NEC Corporation, Japan); Akihiko K. Sugiyama (NEC Corporation, Japan)

Generalized amplitude interpolation by beta-divergence for virtual microphone array

Hiroki Katahira (University of Tsukuba, Japan); Nobutaka Ono (National Institute of Informatics, Japan); Shigeki Miyabe (University of Tsukuba, Japan); Takeshi Yamada (University of Tsukuba, Japan); Shoji Makino (University of Tsukuba, Japan)

On the generalization of supervised binary mask estimation

Tobias May (Technical University of Denmark, Denmark); Timo Gerkmann (University of Oldenburg, Germany)

A Computationally Constrained Optimization Framework for Implementation and Tuning of Speech Enhancement Systems

Daniele Giacobello (Beats Electronics, USA); Jason Wung (Beats Electronics, LLC, USA); Ramin Pichevar (Beats Electronics LLC, USA); Joshua Atkins (Beats Electronics, USA)

Spectral tilt modelling with extrapolated GMMs for intelligibility enhancement of narrowband telephone speech

Emma Jokinen (Aalto University, Finland); Ulpu Remes (Aalto University, Finland); Marko Takanen (Aalto University, Finland); Kalle Palomäki (Aalto University, Finland); Mikko Kurimo (Aalto University, Denmark); Paavo Alku (Aalto University, Finland)

Near-field Source Extraction Using Speech Presence Probabilities for Ad hoc Microphone Arrays

Maja Taseska (International Audio Laboratories Erlangen, Germany); Shmulik Markovich-Golan (Bar-Ilan University, Israel); Emanuël Habets (International Audio Laboratories Erlangen, Germany); Sharon Gannot (Bar-Ilan University, Israel)

Multichannel Adaptive Filtering in Compressive Domains

Karim Helwani (Huawei European Research Center, Germany); Herbert Buchner (University of Cambridge, United Kingdom)

Numerical Formulae for TOA-based Microphone and Source Localization

Trung-Kien Le (National Institute of Informatics, Japan); Nobutaka Ono (National Institute of Informatics, Japan)

Poster session 4

Thursday, September 11, 2014, 9.45 - 11.00

Blind Synchronization in Wireless Sensor Networks with Application to Speech Enhancement

Dani Cherkassky (Bar-Ilan University, Israel); Sharon Gannot (Bar-Ilan University, Israel)

Validation of Realistic Acoustic Environments for Listening Tests Using Directional Hearing Aids

Chris Oreinos (National Acoustic Laboratories, Australia); Jörg Buchholz (National Acoustic Laboratories, Australia)

Noise Coloration Filter Design By Pole-Zero Placement

Alexis Favrot (Illusonic GmbH, Switzerland)

On Semi-Blind Estimation of Echo Paths During Double-Talk Based on Nonstationarity

Zbynek Koldovsky (Technical University of Liberec, Czech Republic); Jiri Malek (Technical University of Liberec, Czech Republic); Michael Müller (Technical University of Liberec, Czech Republic); Petr Tichavsky (Academy of Sciences of the Czech Republic, Czech Republic)

Amplitude-based speech enhancement with nonnegative matrix factorization for asynchronous distributed recording

Hironobu Chiba (University of Tsukuba, Japan); Nobutaka Ono (National Institute of Informatics, Japan); Shigeki Miyabe (University of Tsukuba, Japan); Yu Takahashi (Yamaha Corporation, Japan); Takeshi Yamada (University of Tsukuba, Japan); Shoji Makino (University of Tsukuba, Japan)

Alternative Formulation and Robustness Analysis of the Multichannel Wiener Filter for Spatially Distributed Microphones

Toby Christian Lawin-Ore (University of Oldenburg, Germany); Sebastian Stenzel (University of Applied Sciences Constance, Germany); Juergen Freudenberger (University of Applied Sciences, Konstanz, Germany); Simon Doclo (University of Oldenburg, Germany)

Towards Online Source Counting in Speech Mixtures Applying a Variational EM for Complex Watson Mixture Models

Lukas Drude (Universität Paderborn, Germany); Aleksej Chinaev (University of Paderborn, Germany); Dang Hai Tran Vu (University of Paderborn, Germany); Reinhold Haeb-Umbach (University of Paderborn, Germany)

Low-Complexity Noise Power Spectral Density Estimation For Harsh Automobile Environments

Christin Baasch (Christian Albrechts University of Kiel, Germany); Vasudev Kandade Rajan (Christian Albrechts University of Kiel, Germany); Mohamed Krini (Paragon AG, Germany); Gerhard Schmidt (CAU Kiel, Germany)

Fast Noise PSD Estimation Based on Blind Channel Identification

Masoumeh Azarpour (Ruhr-Universität Bochum, Germany); Gerald Enzner (Ruhr-University Bochum, Germany)

Online Unsupervised Overlapping Speaker Detection Using Enhanced Classification History-based Features

Youssef Oualil (Saarland University, Germany); Rahil Mahdian Toroghi (Saarland University, Germany); Dietrich Klakow (Saarland University, Germany)

A Study on Speech Quality and Speech Intelligibility Measures for Quality Assessment of Single-Channel Dereverberation Algorithms

Stefan Goetze (Fraunhofer IDMT, Germany); Anna Warzybok (University of Oldenburg, Germany); Ina Kodrasi (University of Oldenburg, Germany); Jan Ole Jungmann (University of Luebeck, Germany); Benjamin Cauchi (Fraunhofer IDMT-HSA, Germany); Jan RENNIES (Fraunhofer IDMT, Germany); Emanuel Habets (International Audio Laboratories Erlangen, Germany); Alfred Mertins (Institute for Signal and Image Processing, University of Luebeck, Germany); Timo Gerkmann (University of Oldenburg, Germany); Simon Doclo (University of Oldenburg, Germany); Birger Kollmeier (Medizinische Physik, Universität Oldenburg, Germany)

Poster session 5

Thursday, September 11, 2014, 11.15 - 12.30

Voice activity detection in transient noise environment using laplacian pyramid algorithm

Nurit Spingarn (Technion, Israel); Saman Mousazadeh (Shiraz University, Iran); Israel Cohen (Technion, Israel)

Geometry Calibration of Multiple Microphone Arrays in Highly Reverberant Environments

Axel Plinge (TU Dortmund University, Germany); Gernot Fink (TU Dortmund University, Germany)

An automatic model-building algorithm for sparse approximation of room impulse responses with orthonormal basis functions

Giacomo Vairetti (KU Leuven, Belgium); Toon van Waterschoot (KU Leuven, Belgium); Marc Moonen (KU Leuven, Belgium); Michael Catrysse (Televis N. V., Belgium); Søren Holdt Jensen (Aalborg University, Denmark)

A new structure for acoustic echo cancellation in double-talk scenario using auxiliary filter

Mahfoud Hamidia (University of Science and Technology Bab Ezzouar, Algeria); Abderrahmane Amrouche (USTHB, Algeria)

Multiple source localisation in the spherical harmonic domain

Christine Evers (Imperial College London, United Kingdom); Alastair Moore (Imperial College London, United Kingdom); Patrick A Naylor (Imperial College London, United Kingdom)

Acoustic modeling based on Early-to-Late Reverberation Ratio for robust ASR

Marco Matassoni (Fondazione Bruno Kessler, Italy); Alessio Brutti (Fondazione Bruno Kessler, Italy); Piergiorgio Svaizer (Fondazione Bruno Kessler, Italy)

Relaxed disjointness based clustering for joint blind source separation and dereverberation

Ito Nobutaka (NTT, Japan); Shoko Araki (NTT Communication Science Laboratories, Japan); Takuya Yoshioka (NTT Communication Science Laboratories, Japan); Tomohiro Nakatani (NTT Corporation, Japan)

Reverberant Audio Source Separation using Partially Pre-trained Nonnegative Matrix Factorization

Mahmoud Fakhry (University of Trento, Italy); Piergiorgio Svaizer (Fondazione Bruno Kessler, Italy); Maurizio Omologo (Fondazione Bruno Kessler - irst, Italy)

Investigation of Self-Masking Effects for the Evaluation of In-Car Communication Systems

Anne Theiß (Christian-Albrecht-Universität zu Kiel, Germany); Gerhard Schmidt (CAU Kiel, Germany)

Single Channel Noise Reduction based on an Auditory Filterbank

Steffen Kortlang (University of Oldenburg, Germany); Stephan Ewert (Medizinische Physik, Universität Oldenburg, Germany); Timo Gerkmann (University of Oldenburg, Germany)

Optimal Binaural LCMV Beamformers for Combined Noise Reduction and Binaural Cue Preservation

Daniel Marquardt (University of Oldenburg, Germany); Elior Hadad (Bar-Ilan University, Israel); Sharon Gannot (Bar-Ilan University, Israel); Simon Doclo (University of Oldenburg, Germany)

Poster session 6

Thursday, September 11, 2014, 15.15 - 16.45

A Reduced-Rank Approach to Single-Channel Noise Reduction

Wei Zhang (Northwestern Polytechnical University, P.R. China); Jingdong Chen (Northwestern Polytechnical University, USA); Jacob Benesty (INRS-EMT, University of Quebec, Canada)

A quantitative comparison of blind C50 estimators

Pablo Peso Parada (Nuance Communications, United Kingdom); Dushyant Sharma (Nuance Communications, United Kingdom); Jose Lainez (Nuance Communications, United Kingdom); Daniel Barreda (Nuance Communications, United Kingdom); Patrick A Naylor (Imperial College London, United Kingdom); Toon van Waterschoot (KU Leuven, Belgium)

On the Performance of Widely Linear Quaternion based MVDR Beamformer for An Acoustic Vector Sensor

Jiuwen Cao (Hangzhou Dianzi University, P.R. China); Andy W. H. Khong (Nanyang Technological University, Singapore); Sharon Gannot (Bar-Ilan University, Israel)

STSP: Space-Time Stretched Pulse For Measuring Spatio-Temporal Impulse Response

Shoichi Koyama (The University of Tokyo, Japan); Prakhar Srivastava (Georgia Institute of Technology, USA); Ken'ichi Furuya (Oita University, Japan); Suehiro Shimauchi (NTT Media Intelligence Laboratories, NTT Corporation, Japan); Hitoshi Ohmuro (NTT, Japan)

Multichannel Audio Database in Various Acoustic Environments

Elior Hadad (Bar-Ilan University, Israel); Florian Heese (RWTH Aachen University, Germany); Peter Vary (RWTH Aachen, Germany); Sharon Gannot (Bar-Ilan University, Israel)

Traffic monitoring with ad-hoc microphone array

Toyoda Takuya (University of Tsukuba, Japan); Nobutaka Ono (National Institute of Informatics, Japan); Shigeki Miyabe (University of Tsukuba, Japan); Takeshi Yamada (University of Tsukuba, Japan); Shoji Makino (University of Tsukuba, Japan)

The Acoustic Echo Cancellation Using Blind Source Separation to Reduce Double-Talk Interference

Yoshihiro Sakai (Tsuyama National College of Technology, Japan); Muhammad T Akhtar (Tokyo Institute of Technology, Japan)

Measurement, Analysis and Simulation of Wind Noise Signals for Mobile Communication Devices

Christoph M. Nelke (RWTH Aachen University, Germany); Peter Vary (RWTH Aachen, Germany)

Subjective Speech Quality and Speech Intelligibility Evaluation of Single-Channel Dereverberation Algorithms

Anna Warzybok (University of Oldenburg, Germany); Ina Kodrasi (University of Oldenburg, Germany); Jan Ole Jungmann (University of Luebeck, Germany); Emanuël Habets (International Audio Laboratories Erlangen, Germany); Timo Gerkmann (University of Oldenburg, Germany); Alfred Mertins (Institute for Signal and Image Processing, University of Luebeck, Germany); Simon Doclo (University of Oldenburg, Germany); Birger Kollmeier (Medizinische Physik, Universität Oldenburg, Germany); Stefan Goetze (Fraunhofer IDMT, Germany)

Time-Frequency Constraints for Phase Estimation in Single-Channel Speech Enhancement

Pejman Mowlae (Graz University of Technology (TU Graz), Austria); Rahim Saeidi (University of Eastern Finland, Finland)

2.5D Sound Field Reproduction in Higher Order Ambisonics

Wen Zhang (Australian National University, Australia); Thushara D. Abhayapala (Australian National University, Australia)

