

# List of Scientific Publications

## 1. Books and Book Chapters

**Enzner, G.**, Buchner, H., Favrot, A., and Kuech, F.: „Acoustic Echo Control“, in: S. Theodoridis, R. Chellappa (Eds.), *Academic Press Library in Signal Processing*, vol. 4, pp. 807-877, August 2013 (ISBN 978-0-12-396501-1)

**Enzner, G.**, Antweiler, C., and Spors, S.: „Trends in Acquisition of Individual Head-Related Transfer Functions“, in: *The Technology of Binaural Listening*, chap. 3, J. Blauert (Ed.), Springer, Berlin, June 2013 (ISBN 978-3642377617)

**Enzner, G.**: “Nonlinear, Time-Varying, and Blind Acoustic System Identification”, *Habilitation Thesis in the Faculty of Electrical Engineering and Information Technology at Ruhr-Universität Bochum*, submitted December 2012, approved June 2013

**Enzner, G.**: „Kalman Filtering in Acoustic Echo Control: A Smooth Ride on a Rocky Road“, in: *Advances in Digital Speech Transmission*, R. Martin, U. Heute, C. Antweiler (Eds.), John Wiley & Sons Ltd, Chichester, England, Feb. 2008

**Enzner, G.**: „A Model-Based Optimum Filtering Approach to Acoustic Echo Control: Theory and Practice“, *Doctoral Thesis, RWTH Aachen, Aachener Beiträge zu digitalen Nachrichtensystemen, Vary P. (ed.)*, Wissenschaftsverlag Mainz, Aachen, April 2006

## 2. Journal Papers

**Enzner, G.** and Thüne, P., “Bayesian MMSE filtering of noisy speech by SNR marginalization with global PSD priors”, *IEEE/ACM Trans. on Audio, Speech, and Language Processing*, vol. 26, no. 12, pp. 2289-2304, Dec. 2018

Zohourian, M., **Enzner G.**, and Martin R., “Binaural speaker localization integrated in an adaptive beamformer for hearing aids”, *IEEE/ACM Trans. on Audio, Speech, and Language Processing*, vol. 26, no. 3, pp. 515-528, March 2018

Azarpour, M. and **Enzner G.**: “Binaural noise reduction via cue-preserving MMSE filter and adaptive-blocking-based noise PSD estimation”, *EURASIP Jnl. on Advances in Signal Processing* (open access: <http://rdcu.be/t5sL>), July 2017

Thüne, P. and **Enzner G.**: “Maximum-Likelihood Approach with Bayesian Refinement for Multichannel-Wiener Postfiltering”, *IEEE Trans. on Signal Processing*, vol. 65, no. 13, pp. 3399-3413, July 2017

Yang, F., **Enzner G.**, Yang, J.: “Frequency-Domain Adaptive Kalman Filter with Fast Recovery of Abrupt Echo-Path Changes”, *IEEE Signal Proc. Letters*, vol. 24, no. 12, pp.1778-1782, Dec. 2017

Yang, F., **Enzner G.**, and Yang, J.: “Statistical Convergence Analysis for Optimal Control of DFT-Domain Adaptive Echo Canceler”, *IEEE/ACM Trans. on Audio, Speech, and Language Processing*, vol. 25, no. 5, pp. 1095-1106, Feb. 2017

Schmid, D., **Enzner, G.**, Malik, S., Kolossa, D., and Martin, R. : "Variational Bayesian Inference for Multichannel Dereverberation and Noise Reduction", *IEEE Trans. on Audio, Speech, and Language Processing*, vol. 22, no. 8, pp. 1320-1334, Aug. 2014

Malik, S. and **Enzner, G.**: "A variational Bayesian learning approach for nonlinear acoustic echo control", *IEEE Trans. on Signal Processing*, vol. 61, no. 23, pp. 5853-5867, Dec. 2013

Malik, S. and **Enzner, G.**: "State-space frequency-domain adaptive filtering for nonlinear acoustic echo cancellation", *IEEE Trans. on Audio, Speech, and Language Processing*, vol. 20, no. 7, pp. 2065-2079, Sep. 2012

Malik, S., Schmid, D., and **Enzner, G.**: "A state-space cross-relation approach to adaptive blind SIMO identification", *IEEE Signal Proc. Letters*, vol. 19, no. 8, pp. 511-514, Aug. 2012.

Schmid, D. and **Enzner, G.**: "Cross-relation-based blind SIMO identifiability in the presence of near-common zeros and noise", *IEEE Trans. on Signal Processing*, vol. 60, no. 1, pp. 60-72, Jan. 2012

Malik, S. and **Enzner, G.**: "Recursive Bayesian control of multichannel acoustic echo cancellation", *IEEE Signal Proc. Letters*, vol. 18, no. 11, pp. 619-622, Nov. 2011.

Pawig, M., **Enzner, G.**, and Vary, P.: „Adaptive sampling rate correction for acoustic echo control in Voice-over-IP“, *IEEE Trans. on Signal Processing*, vol. 58, No. 1, Jan. 2010

**Enzner, G.** and Vary, P.: „Frequency-domain adaptive Kalman filter for acoustic echo control in hands-free telephones“, *Signal Proc., Elsevier*, vol. 86, no. 6, pp. 1140-1156, June 2006

**Enzner, G.**, Martin, R., and Vary, P.: „Partitioned residual echo power estimation for frequency-domain acoustic echo cancellation and postfiltering“, *European Trans. on Telecommunications*, vol. 13, no. 2, pp. 103-114, March 2002

Lampe, L., Schober, R., and **Enzner, G.**: „Coded continuous phase modulation with low-complexity non-coherent reception“, *IEEE Trans. on Communications*, vol. 50, no. 4, pp. 517-520, April 2002

### 3. Patents

Malik, S., **Enzner, G.**, Vartiainen, J., Sjöberg, J., and Myllylä, V.: „Recursive Bayesian controllers for non-linear acoustic echo cancellation and suppression systems“, *United States Patent*, Serial. No. US 8,924,337 B2, December 2014

**Enzner, G.**: „Statistical adaptive-filter controller“, *United States Patent*, Serial No. US 7,054,437 B2, May 2006

Myllylä, V. and **Enzner, G.**: „Method for enhancing the acoustic echo cancellation system using residual echo filter“, *United States Patent*, Serial No. US 6,925,176 B2, August 2005

### 4. Conference Proceedings (Peer-Review)

Thüne, P. and **Enzner, G.**, "Maximum-likelihood and maximum-a-posteriori perspectives for blind channel identification on acoustic sensor network data", *Proc. of ITG Conf. Speech Communication, Oldenburg (Germany)*, Oct. 2018

Chinaev, A., **Enzner, G.**, and Schmalenstroeer J. "Fast and accurate audio resampling for acoustic sensor networks by polyphase-Farrow filters with FFT Realization", *Proc. of ITG Conf. Speech Communication, Oldenburg (Germany), Oct. 2018*

Chinaev, A., Thüne, P., and **Enzner, G.**, "Low-rate Farrow structure with discrete-lowpass and polynomial support for audio resampling in acoustic sensor networks", *Proc. of European Signal Processing Conf. (EUSIPCO), Rome (Italy), Sept. 2018*

Urbanietz, C. and **Enzner, G.**: "Binaural rendering of dynamic head and sound source orientation using high-resolution HRTF and retarded time", *Proc. IEEE Intl. Conf. Acoustics, Speech, and Signal Processing (ICASSP), Calgary (Canada), April 2018*

Urbanietz, C. and **Enzner, G.**: "Binaural rendering for sound navigation and orientation", *IEEE 4th Virtual Reality Workshop Sonic Interactions for Virtual Environments, Reutlingen (Germany), March 2018*

**Enzner, G.** and Thüne, P.: "Robust MMSE filtering for single-microphone speech enhancement", *Proc. IEEE Intl. Conf. Acoustics, Speech, and Signal Processing (ICASSP), New Orleans (USA), March 2017*

Azarpour, M., Siska J., and **Enzner, G.**: "Realtime Binaural Speech Enhancement Demo on Raspberry Pi", *Proc. IEEE Intl. Conf. Acoustics, Speech, and Signal Processing (ICASSP), New Orleans (USA), March 2017*

Thüne, P. and **Enzner, G.**: "Maximum-Likelihood Approach to Adaptive Multichannel-Wiener Postfiltering for Wind-Noise Reduction", *Proc. of ITG Conf. Speech Communication, Paderborn (Germany), Oct. 2016*

Azarpour, M., **Enzner, G.**: "Binaural Noise Reduction using Raspberry Pi" Show & Tell at *ITG Conf. Speech Communication, Paderborn (Germany), Oct. 2016*

Zohourian, M., **Enzner, G.**, and Martin R.: "On the Use of Beamforming Approaches for Binaural Speaker Localization", *Proc. of ITG Conf. Speech Communication, Paderborn (Germany), Oct. 2016*

**Enzner, G.**, Azarpour, M., and Siska J.: "Cue-preserving MMSE filter for binaural speech enhancement", *Proc. of Intl. Workshop on Acoustic Signal Enhancement (IWAENC), Xi'an (China), Sep. 2016*

**Enzner, G.**, Kranemann, T., and Thüne, P., "Evaluation of estimated Hammerstein models via normalized projection misalignment of linear and nonlinear subsystems", *Proc. IEEE Intl. Conf. Acoustics, Speech, and Signal Processing (ICASSP), Shanghai (China), March 2016*

Thüne, P. and **Enzner, G.**: "Multichannel Wiener filtering via multichannel decorrelation", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP), Brisbane (Australia), May 2015*

Martin, R., Azarpour M., and **Enzner, G.**: "Binaural speech enhancement with instantaneous coherence smoothing using the cepstral correlation coefficient", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP), Brisbane (Australia), May 2015*

**Enzner, G.**, Martin, R., and Vary, P.: "Uncertainty modeling in acoustic echo control", *Proc. 48th Asilomar Conf. on Signals, Systems & and Computers, Pacific Grove (USA), Nov. 2014*

**Enzner, G.** and Thüne, P.: "On the statistics and the detection of multichannel common zeros", *Proc. of Intl. Workshop on Acoustic Signal Enhancement (IWAENC)*, Antibes (France), Sep. 2014.

Azarpour, M., **Enzner, G.**: "Fast noise PSD estimation based on blind channel identification", *Proc. of Intl. Workshop on Acoustic Signal Enhancement (IWAENC)*, Antibes, Sep. 2014

Kuech, F., Mabande, E., and **Enzner, G.**: „State-space architecture of the partitioned-block-based acoustic echo controller“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Florence (Italy), May 2014

Azarpour, M., **Enzner, G.**, Martin R.: „Binaural noise PSD estimation for binaural speech enhancement“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Florence (Italy), May 2014

**Enzner, G.**, Schmid, D., Häb-Umbach, R.: „On acoustic channel identification in multi-microphone systems via adaptive blind signal enhancement techniques“, *Proc. of European Signal Processing Conf. (EUSIPCO)*, Marrakesch (Morocco), Sept. 2013

Thüne, P., **Enzner, G.**: „Trends in adaptive MISO system identification for multichannel audio reproduction and speech communication“, *Proc. of Intl. Symp. on Image and Signal Processing and Analysis (ISPA)*, Triest (Italy), Sept. 2013

Thüne, P., **Enzner, G.**: „Improved online identification of acoustic MISO systems based on separated input signal components“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Vancouver (Canada), May 2013

**Enzner, G.**, Weinert, M., Abeling, S., Batke, J.-M., Jax, P.: „Advanced system options for binaural rendering of Ambisonic format“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Vancouver (Canada), May 2013

Azarpour, M., **Enzner, G.**, Martin R.: „Adaptive binaural noise reduction based on matched-filter equalization and post-filtering“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Vancouver (Canada), May 2013

Merks, I., **Enzner, G.**, Zhang T.: „Sound source localization with binaural hearing aids using adaptive blind channel identification“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Vancouver (Canada), May 2013

Batke, J.-M., Abeling, S., Jax, P., Weinert, M., **Enzner, G.**: „On the Use of Continuous-Azimuth HRIR in Higher-Order Ambisonics Rendering“, *EAA Euregio*, Merano, March 2013

Schmid, D., Thüne, P., Kolossa, D., **Enzner, G.**: "Dereverberation preprocessing and training data adjustments for robust speech recognition in reverberant environments," *Proc. of ITG Conf. Speech Communication*, Braunschweig, Germany, Sep. 2012.

**Enzner, G.**: "From acoustic nonlinearity to nonlinear adaptive system identification", *Proc. of ITG Conf. Speech Communication*, Braunschweig, Germany, Sep. 2012.

Thüne, P. and **Enzner, G.**: "Assessment of multichannel acoustic system identification using a spectral-importance weighted misalignment", *Proc. of Intl. Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012.

Schmid, D., Malik, S., **Enzner, G.**: "A maximum a posteriori approach to multichannel speech dereverberation and denoising," *Proc. of Intl. Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012.

Azarpour, M., **Enzner, G.**, Martin, R: "Distortionless-response vs. matched-filter-array processing for adaptive binaural noise reduction", *Proc. of Intl. Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012

**Enzner, G.**, Merks, I., Zhang, T.: „Adaptive filter algorithms and misalignment criteria for blind binaural channel identification in hearing-aids“, *Proc. of European Signal Processing Conf. (EUSIPCO)*, Bucharest (Romania), August 2012

Schmid, D., Malik, S., and **Enzner, G.**: "An expectation-maximization algorithm for multichannel adaptive speech dereverberation in the frequency-domain", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Kyoto (Japan), March 2012

Malik, S. and **Enzner, G.**: "Variational Bayesian inference for nonlinear acoustic echo cancellation using adaptive cascade modelling", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Kyoto (Japan), March 2012

Antweiler, C., Telle, A., Vary, P., and **Enzner, G.**: "Perfect-sweep NLMS for time-variant acoustic system identification", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Kyoto (Japan), March 2012

Weinert, M., **Enzner, G.**, Batke, J.-M., Jax, P., and Antweiler, C.: „Komfortable Messung und Bereitstellung individueller kopfbezogener Impulsantworten als OpenDAFF“, *Jahrestagung der Deutschen Gesellschaft für Akustik (DAGA)*, Darmstadt (Germany), March 2012

**Enzner, G.**, Krawczyk, M., Hoffmann, F., and Weinert, M.: "3D reconstruction of HRTF-fields from 1D continuous measurements", *Proc. of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz (NY, USA), Oct. 2011

Malik, S. and **Enzner, G.**: "Fourier expansion of Hammerstein models for nonlinear acoustic system identification", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Prag (Czech Republic), May 2011

Schmid, D. and **Enzner, G.**: "Evaluation of adaptive blind SIMO identification in terms of a normalized filter-projection misalignment", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Prag (Czech Republic), May 2011

**Enzner, G.**: „Fast range-acquisition of head-related impulse responses“, *Jahrestagung der Deutschen Gesellschaft für Akustik (DAGA)*, Düsseldorf (Germany), March 2011

Malik, S. and **Enzner, G.**: "Continuous HRTF acquisition vs. HRTF interpolation for binaural rendering of dynamical auditory virtual environments", *Proc. of ITG Fachtagung Sprachkommunikation*, Bochum (Germany), October 2010

Schmid, D., Thüne, P., and **Enzner, G.**: "A real-time speech dereverberation environment based on multichannel parametric room equalization", *Proc. of ITG Fachtagung Sprachkommunikation*, Bochum (Germany), October 2010

Schmid, D. and **Enzner, G.**: "A parametric least-squares approximation for multichannel equalization of room acoustics", *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Tel-Aviv (Israel), September 2010

**Enzner, G.:** "Bayesian inference model for applications of time-varying acoustic system identification", *Proc. of European Signal Processing Conf. (EUSIPCO)*, Aalborg (Denmark), August 2010

Malik, S. and **Enzner, G.:** "Iterative learning of DFT-domain dynamical models subject to parameter variations", *Proc. of European Signal Processing Conf. (EUSIPCO)*, Aalborg (Denmark), August 2010

Malik, S. and **Enzner, G.:** "Online maximum-likelihood learning of time-varying dynamical models in the block-frequency domain", *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Dallas (TX, USA), March 2010

**Enzner, G.:** "3D-continuous-azimuth acquisition of head-related impulse responses using multi-channel adaptive filtering", *Proc. of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz (NY, USA), October 2009

Antweiler, C. and **Enzner, G.:** "Perfect-sequence LMS for rapid continuous-azimuth acquisition of head-related impulse responses", *Proc. of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz (NY, USA), October 2009

Schmid, D. and **Enzner, G.:** "Robust subsystems for iterative multichannel blind system identification and equalization", *Proc. of IEEE Pacific Rim Conf. on Communications, Computers and Signal Processing*, Victoria (B.C., Canada), August 2009

**Enzner, G.:** "Model-based interrelations of adaptive filter algorithms in acoustic echo control", *Proc. of IEEE Pacific Rim Conf. on Communications, Computers and Signal Processing*, Victoria (B.C., Canada), August 2009

Martin, R. and **Enzner, G.:** "Speech enhancement in hearing aids – from noise suppression to rendering of auditory scenes", *Proc. of IEEE 25-th Convention of Electrical and Electronics Engineers in Israel*, Eilat (Israel), December 2008

**Enzner, G.:** "Signal models, filter structures, and adaptive algorithms for acoustic echo control", *Proc. of ITG Fachtagung Sprachkommunikation*, Aachen (Germany), October 2008

Malik, S. and **Enzner, G.:** "Model-based vs. traditional frequency-domain adaptive filtering in the presence of continuous double-talk and acoustic echo path variability", *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Seattle (Washington), Sept. 2008

**Enzner, G.:** „Analysis and optimal control of LMS-type adaptive filtering for continuous-azimuth acquisition of head related impulse responses“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Las Vegas (Nevada), April 2008

**Enzner, G.** and Pauls, M.: „VDA Bewertung der modellbasierten Optimalfilterung für die Echounterdrückung in KFZ-Freisprechsystemen“, *Jahrestagung der Deutschen Gesellschaft für Akustik (DAGA)*, Dresden (Germany), March 2008

Sauert, B., **Enzner, G.** and Vary, P.: „Near end listening enhancement with strict loudspeaker output power constraining“, *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Paris (France), September 2006

**Enzner, G.** and Vary, P.: „Concept for combined reduction of acoustic echo and coding noise in digital cellular networks“, *Proc. ITG Congress Speech Comm.*, Kiel (Germany), April 2006

**Enzner, G.** and Vary, P.: „On the problem of acoustic echo control in cellular networks“, *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Eindhoven (Netherlands), pp. 213-216, September 2005

**Enzner, G.** and Vary, P.: „New insights into the statistical signal model and the performance bounds of acoustic echo control“, *Proc. of European Signal Processing Conf. (EUSIPCO)*, Antalya (Turkey), September 2005

**Enzner, G.**, Mauler, D., and Vary, P.: „Realtime performance of acoustic echo canceler and postfilter for residual echo suppression in the car environment“, *Congres Francais d'Acoustique (CFA) und Jahrestagung der Deutschen Gesellschaft für Akustik (DAGA)*, Strasbourg (France), March 2004

Krüger, H., Lotter, T., **Enzner, G.**, and Vary, P.: “A PC-based platform for multichannel real-time audio processing”, *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Kyoto (Japan), September 2003

**Enzner, G.** and Vary, P.: „Robust and elegant, purely statistical adaptation of acoustic echo canceler and postfilter“, *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Kyoto (Japan), pp. 43-46, September 2003

**Enzner, G.** and Vary, P.: „A soft-partitioned frequency-domain adaptive filter for acoustic echo cancellation“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Hong Kong (China), pp. 393-396, May 2003

**Enzner, G.:** „Hands-free communication: A unified concept of acoustic echo cancellation and residual echo suppression“, *Jahrestagung der Deutschen Gesellschaft für Akustik (DAGA)*, Aachen (Germany), März 2003

**Enzner, G.**, Martin, R. and Vary, P.: „The tight relation between acoustic echo cancellation and residual echo suppression by postfiltering“, *13. Konferenz Elektronische Sprachsignalverarbeitung (ESSV)*, Dresden (Germany), pp. 213-220, September 2002

**Enzner, G.**, Martin, R., and Vary, P.: „Unbiased residual echo power estimation for hands-free telephony“, *Proc. of IEEE Intl. Conf. on Acoustics, Speech, and Signal Processing (ICASSP)*, Orlando (Florida), pp. 1893-1869, May 2002

**Enzner, G.**, Martin, R., and Vary, P.: „On spectral estimation of residual echo in hands-free telephony“, *Proc. of Intl. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Darmstadt (Germany), pp. 211-214, September 2001

**Enzner, G.**, Lampe, L., Schober, R., and Huber, J. B.: “Noncoherent coded continuous phase modulation”, *Proc. of Aachen Symposium on Signal Theory*, Aachen (Germany), September 2001

Schober, R., Lampe, L., and **Enzner, G.:** „Noncoherent sequence estimation: A comparison“, *Proc. of Intl. Conf. on Telecommunications (ICT '01)*, Bucharest (Romania), June 2001

Lampe, L., Schober, R., **Enzner, G.**, and Huber, J. B.: “Noncoherent coded continuous phase modulation”, *Proc. of Intl. Conf. on Communications (ICC '01)*, Helsinki, June 2001

##### 5. Additional Presentations (since 2007)

**Enzner, G.**, Azarpour, M., and Siska, J.: “Binaural Noise Reduction with Low Complexity and Reduced Latency”, *Live-Demonstration at IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA), New Paltz (New York), October 2017*

**Enzner, G.:** “Algorithms and Applications of Multichannel Adaptive Sound Enhancement”, *Seminar at Chinese Academy of Sciences, Peking, China, September 2016*

**Enzner, G.:** “Multichannel Sound Acquisition and Enhancement”, *Invited Seminar at Universität Erlangen-Nürnberg, July 2016*

**Enzner, G.:** “Multichannel Sound Acquisition and Enhancement”, *forum | IKS, RWTH Aachen University, June 2016*

**Enzner, G.:** “Multichannel Sound Acquisition and Enhancement”, Antrittsvorlesung, *Faculty of Electrical Engineering and Information Technology, Ruhr-University Bochum, April 2016*

**Enzner, G.:** “Multichannel Sound Acquisition and Enhancement”, *Invited Seminar at Technische Universität München, February 2016*

**Enzner, G.:** “Nonlinear, Time-Varying, and Blind Acoustic System Identification”, *Invited Seminar at Universität Hamburg, May 2015*

**Enzner, G.:** “Nonlinear, Time-Varying, and Blind Acoustic System Identification”, *Invited Seminar at University of Sidney, May 2015*

**Enzner, G.:** “Trends in Hands-free Communication”, *ITG-Conference on Speech Communication, Erlangen, September 2014*

**Enzner, G.:** “SMART GRID”, Habilitation Colloquium in the *Faculty of Electrical Engineering and Information Technology, Ruhr-University Bochum, July 2013*

**Enzner, G.:** “Research lectures in adaptive and acoustic signal processing”, *Starkey Laboratories Inc., Eden Prairie (MN, USA), October – December 2011*

Hänsler, E., **Enzner, G.**, and Gierlich, H.W.: “1. Kalman Filters 2. Kalman Filters with Applications to Speech Enhancement 3. Car Hands-free Testing and Optimization”, *Structured Tutorials at DSP in Vehicles Conf., Kiel, September 2011*

**Enzner, G.:** “Rapid and quasi-continuous access to individualized HRTF-fields”, *Invited to the AKU-MEDI-SIGNAL Seminar at Carl-von-Ossietzky Universität Oldenburg, June 2011*

**Enzner, G.:** “Towards continuous measurement of head-related impulse responses”, *Presentation in ITG-Fachgruppe Algorithmen für die Signalverarbeitung, Deutsche Telekom Laboratories, Berlin, April 2011*

**Enzner, G.**, and Jahnke, I.: “Being 3.0 (Mensch 3.0) – Verantwortung in der digitalen Welt”, *Presentation in Global Young Faculty (Mercator Foundation, University Alliance Metropolis Ruhr) Midterm Meeting, Essen Philharmonie, June 2010*

**Enzner, G.:** “Model-based analysis and synthesis of time-varying acoustic environments”, *Invited colloquium at University of Erlangen-Nuremberg, July 2009*

**Enzner, G.:** “State-space frequency-domain adaptive filtering in hands-free audio communication”, *Presentation in ITG-Fachgruppe Algorithmen für die Signalverarbeitung, ETH, Zürich (Switzerland), March 2009*



**Enzner, G.:** “Continuous-azimuth acquisition of HRIRs using adaptive filtering techniques” and “Acoustic state-space modelling for adaptive echo cancellation in hands-free telephones”, Invited Lectures in Spatial Sound Modeling, *EU-Mobility Teaching Assignment to Helsinki University of Technology*, April 2008

**Enzner, G.:** “A model-based optimum filtering approach to acoustic echo control”, Inauguration lecture to the *Faculty of Electrical Engineering and Information Technology*, Ruhr-University Bochum, October 2007