

# Prof. Dr. Simon Doclo



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## PROFESSIONAL EXPERIENCE

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- since Dec 2010     **Fraunhofer IDMT, Division Hearing, Speech and Audio Technology**  
Scientific leader “Signal Processing and Personalized Hearing Systems”
- since Sep 2009     **Dept. of Medical Physics and Acoustics, University of Oldenburg, Germany**  
Full Professor (Head of Signal Processing Group)
- Dec 2007-Aug 2009     **NXP Semiconductors, Leuven, Belgium**  
Principal Scientist (Sound & Acoustics Group)
- Jun 2003-Nov 2007     **Dept. of Electrical Engineering, Katholieke Universiteit Leuven, Belgium**  
Postdoctoral Fellow (with Prof. Dr. Marc Moonen)
- Jan 2005-Dec 2005     **Dept. of Electrical Engineering, McMaster University, Canada**  
Visiting Postdoctoral Fellow (with Prof. Dr. Simon Haykin)
- Aug 1997-May 2003     **Dept. of Electrical Engineering, Katholieke Universiteit Leuven, Belgium**  
Research Assistant (with Prof. Dr. Marc Moonen)

## ACADEMIC DEGREES

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- May 2003     PhD in Applied Sciences, Katholieke Universiteit Leuven, Belgium  
“Multi-microphone noise reduction and dereverberation techniques for speech applications”
- Jul 1997     MSc in Electrical Engineering, Katholieke Universiteit Leuven, Belgium (*magna cum laude*)  
“Enhancement of speech intelligibility in hearing aids by adaptive noise suppression in real time”

## RESEARCH INTERESTS

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Signal processing for acoustical and biomedical applications  
Microphone array processing for signal enhancement, sound localisation, echo and feedback suppression  
Distributed and cooperative processing for acoustic sensor networks  
Computational auditory scene analysis, auditory attention decoding  
Application to hearing aids, cochlear implants and assistive listening devices

## AWARDS

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- Best Paper Award, VDE Information Technology Society, 2019 (with Ina Kodrasi)  
PhD Supervision Award, School of Medicine and Health Sciences, University of Oldenburg, 2019  
Best Paper Award (1st Prize), International Conference on Digital Audio Effects, 2017 (with Kai Siedenburg)  
Best Paper Award, IEEE Signal Processing Society, 2008 (with Jingdong Chen, Jacob Benesty, Arden Huang)  
Best Paper Award, EURASIP Signal Processing, 2003 (with Marc Moonen)  
Best Student Paper Award, International Workshop on Acoustic Echo and Noise Control, 2001  
Master Thesis Award, Royal Flemish Society of Engineers, 1997 (with Erik De Clippel)

## **ACADEMIC FUNCTIONS**

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Director, Dept. of Medical Physics and Acoustics, University of Oldenburg (2019-2023)  
Chair of the Board of Examiners, Engineering Physics, University of Oldenburg (since 2018)  
Deputy Member of Doctoral Board, School of Medicine and Health Sciences (since 2014)  
Member of Extended Management Board in Cluster of Excellence Hearing4all (since 2013)  
Member of Joint Committee Engineering Physics, University of Oldenburg (since 2011)

## **OFFICE IN PROFESSIONAL COMMITTEES**

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IEEE Signal Processing Society, Audio and Acoustic Signal Processing Technical Committee (2008-2013, 2017-2022)  
EURASIP, Acoustic, Speech and Music Signal Processing Technical Area Committee (2016-2021)  
EAA, Audio Signal Processing Technical Committee (since 2016)  
ITG, Fachausschuss AT3 Sprachkommunikation (since 2014)  
ITG, Fachgruppe „Signalverarbeitung und maschinelles Lernen“ (since 2009)  
International Workshop on Acoustic Signal Enhancement, Technical and Steering Committee (since 2013)  
IEEE Benelux Signal Processing Chapter, Technical Committee (2002-2007)  
IEEE Benelux Signal Processing Chapter, Secretary (1997-2002)

## **EDITORIAL ACTIVITIES**

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Senior Area Editor, IEEE/ACM Transactions on Audio, Speech and Language Processing (since 2021)  
Associate Editor, IEEE/ACM Transactions on Audio, Speech and Language Processing (2015-2019)  
Associate Editor, EURASIP Journal on Advances in Signal Processing (2014-2019)  
Guest Editor, *IEEE Signal Processing Magazine*, special issue on “Signal Processing Techniques for Assisted Listening” (2015), *Elsevier Signal Processing*, special issue on “Wireless acoustic sensor networks and ad hoc microphone arrays” (2014), *EURASIP Journal on Advances in Signal Processing*, special issues on “Microphone Array Speech Processing” (2009), “Advances in Multimicrophone Speech Processing” (2006), “DSP in Hearing Aids and Cochlear Implants” (2005)

## **CONFERENCE ORGANISATION**

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Technical Program Chair, International Workshop on Acoustic Signal Enhancement, 2022  
Chair, ITG Conference on Speech Communication, 2018  
Area Chair, Audio and Acoustic Signal Processing, European Signal Processing Conference, 2018  
Finance Chair, AES Int. Conference on Dereverberation and Reverberation of Audio, Music, and Speech, 2016  
Area Chair, Audio and Acoustic Signal Processing, European Signal Processing Conference, 2015  
Technical Program Chair, IEEE Workshop on Applications of Signal Processing to Audio and Acoustics, 2013  
Special session organisation: Forum Acusticum 2023, ICASSP 2020, ICA 2019, EUSIPCO 2017, EFAS 2015, ICASSP 2015, EUSIPCO 2013, EUSIPCO 2012.

## **FELLOWSHIPS - GRANTS**

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Research Foundation – Flanders, Postdoctoral Fellowship (6 years, 2004-2010)

European Union, Marie-Curie Outgoing International Fellowship (declined in order to accept Postdoctoral Fellowship of Research Foundation – Flanders)

KU Leuven Research Fund, Postdoctoral Fellowship (1 year, 2003-2004)

Flemish Institute for Scientific and Technological Research, PhD scholarship (4 years, 1998-2002)

## **RESEARCH PROJECTS**

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“Computational Auditory Scene Analysis algorithms for improving speech communication in complex acoustic environments”, project in Collaborative Research Centre "Hearing acoustics: Perceptual principles, Algorithms and Applications", PI, German Research Foundation (2018-2026)

“MIMO acoustic earpiece for combined equalization, feedback cancellation and noise reduction”, project in Collaborative Research Centre "Hearing acoustics: Perceptual principles, Algorithms and Applications", PI, German Research Foundation (2018-2026)

Cluster of Excellence “Hearing4all - Models, technology and solutions for diagnostics, restoration and support of hearing”, PI, German Research Foundation (2012-2025)

“Service-Oriented, Ubiquitous, Network-Driven Sound (SOUNDS)”, PI, European Training Network, European Union (2021-2024)

“Test, Predict, and Improve Musical Scene Perception of Hearing-Impaired Listeners”, Individual Fellowship, European Union (2018-2020)

“Active sound field control for sound reproduction in open ear canals”, project in Research Unit “Individualized Hearing Acoustics”, PI, German Research Foundation (2012-2018)

“Acoustic scene aware speech enhancement for binaural hearing aids”, Joint Lower Saxony-Israel research project, in cooperation with Bar-Ilan University, PI, VolkswagenStiftung (2015-2018)

“Algorithms and objective measures for speech dereverberation”, in cooperation with Institut National de la Recherche Scientifique (Canada), PI, German Academic Exchange Service (2015-2016)

“Individualized acoustic feedback cancellation for hearing aids”, in cooperation with Curtin University (Australia), PI, German Academic Exchange Service (2015-2016)

“Dereverberation and Reverberation of Audio, Music and Speech (DREAMS)”, PI, Initial Training Network, European Union (2013-2016)

“Signal Dereverberation Algorithms for Next-Generation Binaural Hearing Aids”, in cooperation with International Audio Labs Erlangen and Bar-Ilan University, PI, German-Israeli Foundation for Scientific Research and Development (2013-2015)

“Multi-channel signal processing for networked and spatially distributed microphones”, project in Research Unit “Individualized Hearing Acoustics”, PI, German Research Foundation (2012-2015)

“Signal processing and network design for wireless acoustic sensor networks”, in cooperation with University of Ghent, Research Foundation Flanders (2008-2011)

“Improving the perception of speech and music in cochlear implants”, in cooperation with Cochlear Technology Centre Europe, Flemish Institute for Scientific and Technological Research (2006-2007)

“Performance improvement of cochlear implants by innovative speech processing algorithms”, in cooperation with Cochlear Technology Centre Europe, Flemish Institute for Scientific and Technological Research (2002-2004)

“Multi-microphone signal enhancement techniques for hands-free telephony and voice-controlled systems”, in cooperation with Philips ITCL, Flemish Institute for Scientific and Technological Research (1998-2002)

## PHD MENTORING AND RESEARCH SUPERVISION

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### 1) Supervised PhD theses

Naveen Desiraju, *Low-complexity acoustic echo cancellation and model-based residual echo suppression*, Feb. 2022.

Mina Fallahi, *Optimization and evaluation of a virtual artificial head for individual dynamic spatial sound reproduction over headphones*, Sep. 2021.

Benjamin Cauchi, *Non-intrusive quality evaluation of speech processed in noisy and reverberant environments*, Aug. 2021.

Dörte Fischer, *Single-microphone multi-frame speech enhancement exploiting speech interframe correlation*, Nov. 2020.

Ali Aroudi, *Cognitive-driven speech enhancement using EEG-based auditory attention decoding for hearing aid applications*, Nov. 2020.

Nico Gößling, *Binaural beamforming algorithms and parameter estimation methods exploiting external microphones*, Oct. 2020.

Matthias Brandt, *Automatic restoration of audio signals in media archives*, May 2018.

Henning Schepker, *Robust feedback suppression algorithms for single- and multi-microphone hearing aids*, Dec. 2017.

Ante Jukić, *Sparse multi-channel linear prediction for blind speech dereverberation*, Nov. 2017.

Ina Kodrasi, *Dereverberation and noise reduction techniques based on acoustic multi-channel equalization*, Dec. 2015.

Daniel Marquardt, *Development and evaluation of psychoacoustically motivated binaural noise reduction and cue preservation techniques*, Nov. 2015.

Eugen Rasumow, *Synthetic reproduction of head-related transfer functions by using microphone arrays*, Mar. 2015.

### 2) Current PhD students

Klaus Brümmer, *Microphone array geometry calibration and source localization*

Daniel Fejgin, *Binaural source localization and mapping*

Henri Gode, *Multi-microphone noise reduction and dereverberation*

Raj Gohil, *Robust acoustic event detection and localization in acoustic sensor networks*

Ulrik Kowalk, *Automatic signal enhancement with preservation of localization cues in the classroom*

Anselm Lohmann, *Algorithms for joint dereverberation and noise reduction in acoustic sensor networks*

Wiebke Middelberg, *Speech enhancement in acoustic sensor networks*

Kaspar Müller, *Distributed algorithms for speech communication in a car*

Mattes Ohlenbusch, *Speech communication in noisy environments using a MIMO earpiece with multiple microphones and receivers*

Stepan Shishkin, *Active learning for sound event classification and detection*

Ragini Sinha, *Target peaker extraction using deep neural networks*

Marvin Tammen, *Combination of Model-Based and Learning-Based Approaches for Speech Enhancement*

Reza Varzandeh, *Neuro-informed acoustic source extraction*

### 3) Member of thesis committee and/or examiner of PhD thesis

University of Oldenburg, Germany (Bernd Meyer, Armand Djouguela, Tobias Rosenkranz, Stefan Fredelake, Anna Warzybok, Martin Krawczyk-Becker, Niko Moritz, Julian Grosse, Sarah Blum, Sarinah Sutojo)

Leibniz University Hannover, Germany (Ingo Schmädecke, Reemt Hinrichs)

RWTH Aachen, Germany (Marco Jeub, Johannes Fabry)

University of Erlangen-Nuremberg, Germany (Stefan Wehr, Oliver Thiergart, Daniele Mirabilli)

Ruhr-Universität Bochum, Germany (Sebastian Gergen)

Katholieke Universiteit Leuven, Belgium (Alexander Bertrand, Kim Ngo, Bram Cornelis, Raphael Koning, Thomas Dietzen)

Vrije Universiteit Brussel, Belgium (Georgios Athanasopoulos)

Delft University of Technology, The Netherlands (Andreas Koutrouvelis, Jamal Amini)

Eindhoven University of Technology, The Netherlands (Tobias May)

University of Rennes I, France (Diego di Carlo)

Imperial College London, UK (Felicia Lim)

Bar-Ilan University, Israel (Ofar Schwartz)

Nanyang Technological University, Singapore (Shen Xiaoyi)

### **MSC STUDENTS**

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- 2023 Extension and Evaluation of a Semi-supervised Variational Autoencoder for Binaural Direction of Arrival Estimation (V. Boukun)
- 2023 Blind MIMO Dereverberation using Switching Filters for Dynamic Acoustic Scenarios (J. Rüsing)
- 2022 Development of an algorithm for real-time acoustic stimulation of slow neuronal oscillations during deep sleep (L. Kramer)
- 2021 Informed single- and multi-microphone algorithms for speech communication exploiting an in-ear microphone (M. Ohlenbusch)
- 2021 GSC-based Noise and Interference Reduction for binaural hearing aids exploiting external microphones (W. Middelberg)
- 2021 Blind Geometry Estimation of a Distributed Microphone Array Using Reverberant Speech (K. Brümmer)
- 2020 Combined feedback cancellation and acoustical transparency for a multi-microphone earpiece (F. Kunze)
- 2020 Grey-box modeling of loudspeaker nonlinearities to improve acoustic echo cancellation algorithms (R. Liebchen)
- 2020 MIMO Convolutional Beamforming for Joint Dereverberation and Denoising (H. Gode)
- 2020 Active Noise Control for hearing devices using Delta-Sigma modulation and low-latency digital filter techniques (M. Kreuzhage)
- 2019 Evaluation of source separation algorithms for speech intelligibility improvement of broadcast signals (C. Dachmann)
- 2019 Optimisation of single-channel DNN-based speech enhancement (M. Zimmermann)
- 2019 Semi-Automatic Magnetic Map Creation For Indoor Localization (D. Fejgin)

- 2018 Preprocessing and noise reduction of speech for playback in reverberant and noisy environments (A. Pusch)
- 2018 Binaural source localization for hearing aids incorporating an external microphone signal (M.-A. Lacroix)
- 2018 Extension and Evaluation of Multichannel Diffuse Power Spectral Density Estimators (M. Tammen)
- 2018 Development and Evaluation of Weighted Partial Noise Preservation Algorithms for Binaural Hearing Aids (J. Klug)
- 2018 Evaluating Feedback Cancellation using a Null-Steering Beamformer for Public Address Systems (J. Deza Sorribas)
- 2017 Analysis and evaluation of multichannel frequency-domain acoustic echo cancellation algorithms (S. Wilksen)
- 2015 Extension and Validation of Near-End Listening Enhancement Algorithms for Hearing-Impaired Listeners (D. Hülsmeier)
- 2014 Analysis of multichannel noise reduction algorithms for spatially distributed microphones and sources (A. Volgenandt)
- 2012 Development and evaluation of near-end listening enhancement algorithms (H. Schepker)
- 2012 Sensor Localization in Acoustic Sensor Networks (C. Bartsch)
- 2012 Analysis of human and algorithmic ability to estimate relative speaker orientation (S. Franz)
- 2012 Reduction of Gaussian, Supergaussian and Impulsive Noise by Processing of the Binary Masking Residual (M. Ruhland)
- 2011 Analysis of joint pitch and position estimation for simultaneous speakers (S. Gerlach)
- 2010 Sensor position optimization for superdirective beamforming (I. Kodrasi)
- 2009 Active noise reduction for cars (K. De Noël, M. Vercruysse)
- 2007 Blind source separation and localisation of multiple speakers (B. Cornelis, K. Vanderloock)
- 2006 Real-time implementation of multi-microphone noise reduction techniques in hearing aids (S. Günaydin, S. Heselmans)
- 2006 Binaural signal processing for hearing aids: Compression (J. Beckers, L. Vandevenne)
- 2003 Multi-microphone source localisation and noise reduction techniques for speech applications (S. Van Hoef)
- 2001 Speech dereverberation techniques for voice-controlled systems (P. Vandewalle)
- 2000 Detection algorithms for echo and noise suppression applications (D. Warnez)
- 1999 Speech enhancement using iterative Wiener filtering techniques (A. Spriet, K. Vanbleu)
- 1999 DSP implementation of spectral subtraction techniques for speech enhancement (R. Geeroms)

## PUBLICATIONS

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**Google Scholar:** Citations: 8071, h-index: 42

### International Journal Papers

1. M. Tammen, **S. Doclo**, Parameter Estimation Procedures for Deep Multi-Frame MVDR Filtering for Single-Microphone Speech Enhancement, *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 31, pp. 3237-3248, 2023.
2. P. Didier, T. van Waterschoot, **S. Doclo**, M. Moonen, Sampling Rate Offset Estimation and Compensation for Distributed Adaptive Node-Specific Signal Estimation in Wireless Acoustic Sensor Networks, *IEEE Open Journal of Signal Processing*, vol. 4, pp. 71-79, 2023.
3. N. K. Desiraju, **S. Doclo**, M. Buck, T. Wolff, Joint Online Estimation of Early and Late Residual Echo PSD for Residual Echo Suppression, *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 31, pp. 333-344, 2023.
4. E. Hadad, **S. Doclo**, S. Nordholm, S. Gannot, A Class of Pareto Optimal Binaural Beamformers, *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 30, pp. 2612-2628, 2022.
5. H. Schepker, F. Denk, B. Kollmeier, **S. Doclo**, Robust single- and multi-loudspeaker least-squares-based equalization for hearing devices, *EURASIP Journal on Audio, Speech, and Music Processing*, 2022:15.
6. A. Aroudi, E. Fischer, M. Serman, H. Puder, **S. Doclo**, Closed-loop cognitive-driven gain control of competing sounds using auditory attention decoding, *Algorithms, special issue on Frontiers in EEG Signal Processing*, vol. 14, no. 10, 287, 2021.
7. M. Fallahi, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, M. Blau, Dynamic Binaural Rendering: The Advantage of Virtual Artificial Heads over Conventional Ones for Localization with Speech Signals, *Applied Sciences, special issue on Psychoacoustics for Extended Reality*, vol. 11, no. 15, 6793, 2021.
8. M. Fallahi, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, M. Blau, Evaluation of head-tracked binaural auralizations of speech signals generated with a virtual artificial head in anechoic and classroom environments, *Acta Acustica*, vol. 5, no. 30, 2021.
9. D. Fischer, **S. Doclo**, Robust Constrained MFMVDR Filters for Single-Channel Speech Enhancement based on Spherical Uncertainty Set, *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 29, pp. 618-631, 2021.
10. N. Gößling, D. Marquardt, **S. Doclo**, Performance Analysis of the Extended Binaural MVDR Beamformer with Partial Noise Estimation, *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 29, pp. 462-476, 2021.
11. N. Gößling, E. Hadad, S. Gannot, **S. Doclo**, "Binaural LCMV Beamforming with Partial Noise Estimation," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 28, pp. 2942-2955, 2020.
12. F. Denk, H. Schepker, **S. Doclo**, B. Kollmeier, "Acoustic Transparency in Hearables - Technical Evaluation," *Journal of the Audio Engineering Society*, vol. 68, no. 7/8, pp. 508-521, Jul./Aug. 2020.
13. H. Schepker, F. Denk, B. Kollmeier, **S. Doclo**, "Acoustic Transparency in Hearables - Perceptual Sound Quality Evaluations," *Journal of the Audio Engineering Society*, vol. 68, no. 7/8, pp. 495-507, Jul./Aug. 2020.
14. N. Gößling, D. Marquardt, **S. Doclo**, "Perceptual Evaluation of Binaural MVDR-based Algorithms to Preserve the Interaural Coherence of Diffuse Noise Fields," *Trends in Hearing*, vol. 24, pp. 1-18, Apr. 2020.
15. H. Schepker, S. Nordholm, **S. Doclo**, "Acoustic feedback suppression for multi-microphone hearing devices using a soft-constrained null-steering beamformer," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 28, pp. 929-940, 2020.
16. A. Aroudi, **S. Doclo**, "Cognitive-driven binaural beamforming using EEG-based auditory attention decoding," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 28, pp. 862-875, 2020.
17. T. Dietzen, **S. Doclo**, M. Moonen, T. van Waterschoot, "Square root-based multi-source early PSD estimation and recursive RETF update in reverberant environments by means of the orthogonal

- Procrustes problem,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 28, pp. 755-769, 2020.
18. T. Dietzen, **S. Doclo**, M. Moonen, T. van Waterschoot, “Integrated sidelobe cancellation and linear prediction Kalman filter for joint multi-microphone speech dereverberation, interfering speech cancellation, and noise reduction,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 28, pp. 740-754, 2020.
  19. N. K. Desiraju, **S. Doclo**, M. Buck, T. Wolff, “Online Estimation of Reverberation Parameters for Late Residual Echo Suppression,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 28, pp. 77-91, 2020.
  20. T. Sankowsky-Rothe, H. Schepker, **S. Doclo**, M. Blau, “Acoustic feedback path modeling for hearing aids: comparison of physical position based and position independent models,” *Journal of the Acoustical Society of America*, vol. 147, no. 1, pp. 85-100, Jan. 2020.
  21. B. Cauchi, K. Siedenburg, J. F. Santos, T. H. Falk, **S. Doclo**, S. Goetze, “Non-intrusive speech quality prediction using modulation energies and LSTM-network,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 27, no. 7, pp. 1151-1163, Jul. 2019.
  22. A. Aroudi, B. Mirkovic, M. De Vos, **S. Doclo**, “Impact of Different Acoustic Components on EEG-based Auditory Attention Decoding in Noisy and Reverberant Conditions,” *IEEE Trans. Neural Systems and Rehabilitation Engineering*, vol. 27, no. 4, pp. 652-663, Apr. 2019.
  23. H. Schepker, L. T. T. Tran, S. Nordholm, **S. Doclo**, “Null-steering beamformer based feedback cancellation for multi-microphone hearing aids with incoming signal preservation,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 27, no. 4, pp. 679-691, Apr. 2019.
  24. T. Dietzen, A. Spriet, W. Tirry, **S. Doclo**, M. Moonen, T. van Waterschoot, “Comparative Analysis of Generalized Sidelobe Cancellation and Multi-Channel Linear Prediction for Speech Dereverberation and Noise Reduction,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 27, no. 3, pp. 544-558, Mar. 2019.
  25. M. Brandt, **S. Doclo**, J. Bitzer, “Automatic Noise PSD Estimation for Restoration of Archived Audio,” *Journal of the Audio Engineering Society*, vol. 67, no. 1/2, pp. 38-53, Jan/Feb 2019.
  26. J. Rannies, A. Pusch, H. Schepker, **S. Doclo**, “Evaluation of near-end listening enhancement algorithms by combined speech intelligibility and listening effort measurements,” *Journal of the Acoustical Society of America*, vol. 144, no. 4, EL315-EL321, Oct. 2018.
  27. D. Marquardt, **S. Doclo**, “Interaural Coherence Preservation in Binaural Hearing Aids using Partial Noise Estimation and Spectral Postfiltering,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 26, no. 7, pp. 1257-1270, Jul. 2018.
  28. I. Kodrasi, **S. Doclo**, “Analysis of Eigenvalue Decomposition-Based Late Reverberation Power Spectral Density Estimation,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 26, no. 6, pp. 1106-1118, June 2018.
  29. S. Braun, A. Kuklasinski, O. Schwartz, O. Thiergart, E. A. P. Habets, S. Gannot, **S. Doclo**, J. Jensen, “Evaluation and Comparison of Late Reverberation Power Spectral Density Estimators,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 26, no. 6, pp. 1056-1071, June 2018.
  30. L. T. T. Tran, S. Nordholm, H. Schepker, H. H. Dam, **S. Doclo**, “Two-Microphone Hearing Aids Using Prediction Error Method for Adaptive Feedback Control,” *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 26, no. 5, pp. 909-923, May 2018.
  31. I. Kodrasi, **S. Doclo**, “Improving the Conditioning of the Optimization Criterion in Acoustic Multi-Channel Equalization Using Shorter Reshaping Filters,” *EURASIP Journal on Advances in Signal Processing*, 2018:11, pp. 1-13.
  32. S. Nordholm, H. Schepker, L. T. T. Tran, **S. Doclo**, “Stability-Controlled Hybrid Adaptive Feedback Cancellation Scheme for Hearing Aids,” *Journal of the Acoustical Society of America*, vol. 143, no. 1, pp. 150-166, Jan. 2018.
  33. M. Brandt, **S. Doclo**, T. Gerkmann, J. Bitzer, “Impulsive Disturbances in Audio Archives: Signal Classification for Automatic Restoration,” *Journal of the Audio Engineering Society*, vol. 65, no. 10, pp. 826-840, Oct. 2017.



34. N. K. Desiraju, **S. Doclo**, T. Wolff, "Efficient multichannel acoustic echo cancellation using constrained tap selection schemes in the subband domain," *EURASIP Journal on Advances in Signal Processing*, 2017:63, pp. 1-16.
35. I. Kodrasi, **S. Doclo**, "Signal-Dependent Penalty Functions for Robust Acoustic Multi-Channel Equalization," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 25, no. 7, pp. 1512-1525, Jul. 2017.
36. E. Rasumow, M. Blau, **S. Doclo**, S. van de Par, M. Hansen, D. Püschel, V. Mellert, "Perceptual evaluation of individualized binaural reproduction using a virtual artificial head," *Journal of the Audio Engineering Society*, vol. 65, no. 6, pp. 448-459, June 2017.
37. J. Rennies-Hochmuth, J. Drefs, D. Hülsmeier, H. Schepker, **S. Doclo**, "Extension and evaluation of a near-end listening enhancement algorithm for listeners with normal and impaired hearing," *Journal of the Acoustical Society of America*, vol 141, no. 4, pp. 2526-2537, Apr. 2017.
38. I. Kodrasi, B. Cauchi, S. Goetze, **S. Doclo**, "Instrumental and perceptual evaluation of dereverberation techniques based on robust acoustic multi-channel equalization," *Journal of the Audio Engineering Society*, vol. 65, no. 1/2, Jan./Feb. 2017, pp. 117-129.
39. A. Jukić, T. van Waterschoot, T. Gerkmann, **S. Doclo**, "A general framework for incorporating time-frequency domain sparsity in multi-channel speech dereverberation," *Journal of the Audio Engineering Society*, vol. 65, no. 1/2, Jan./Feb. 2017, pp. 17-30.
40. A. Jukić, T. van Waterschoot, **S. Doclo**, "Adaptive speech dereverberation using constrained sparse multi-channel linear prediction," *IEEE Signal Processing Letters*, vol. 24, no. 1, pp. 101-105, Jan. 2017.
41. A. Kuklasinski, **S. Doclo**, S. H. Jensen, J. Jensen, "Maximum Likelihood PSD Estimation for Speech Enhancement in Reverberation and Noise," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 9, pp. 1595-1608, Sep. 2016.
42. H. Schepker, **S. Doclo**, "Least-squares estimation of the common pole-zero filter of acoustic feedback paths in hearing aids," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 8, pp. 1334-1347, Aug. 2016.
43. S. Grimm, T. C. Lawin-Ore, **S. Doclo**, J. Freudenberger, "Phase Reference for the generalized multichannel Wiener Filter," *EURASIP Journal on Advances in Signal Processing*, 2016:78, pp. 1-10.
44. I. Kodrasi, **S. Doclo**, "Joint Dereverberation and Noise Reduction Based on Acoustic Multichannel Equalization," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 4, pp. 680-693, Apr. 2016.
45. E. Hadad, **S. Doclo**, S. Gannot, "The Binaural LCMV Beamformer and its Performance Analysis," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 3, pp. 543-558, Mar. 2016.
46. L. Wang, **S. Doclo**, "Correlation Maximization Based Sampling Rate Offset Estimation for Distributed Microphone Arrays," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 3, pp. 571-582, Mar. 2016.
47. E. Rasumow, M. Hansen, S. van de Par, D. Püschel, V. Mellert, **S. Doclo**, M. Blau, "Regularization approaches for synthesizing HRTF directivity patterns," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 2, pp. 215-225, Feb. 2016.
48. N. Mohammadiha, **S. Doclo**, "Speech Dereverberation Using Non-negative Convolutional Transfer Function and Spectro-temporal Modeling," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 2, pp. 276-289, Feb. 2016.
49. H. Schepker, **S. Doclo**, "A semidefinite programming approach to min-max estimation of the common part of acoustic feedback paths in hearing aids," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 24, no. 2, pp. 366-377, Feb. 2016.
50. J. Thiemann, M. Müller, D. Marquardt, **S. Doclo**, S. van de Par, "Speech Enhancement for Multimicrophone Binaural Hearing Aids Aiming to Preserve the Spatial Auditory Scene," *EURASIP Journal on Advances in Signal Processing*, 2016:12, pp. 1-11.
51. R. Baumgärtel, M. Krawczyk-Becker, D. Marquardt, C. Völker, H. Hu, T. Herzke, G. Coleman, K. Adiloglu, S. Ernst, T. Gerkmann, **S. Doclo**, B. Kollmeier, V. Hohmann, M. Dietz, "Comparing binaural pre-processing strategies I: Instrumental evaluation," *Trends in Hearing*, vol. 19, pp. 1-16, 2015.

52. R. Baumgärtel, H. Hu, M. Krawczyk-Becker, D. Marquardt, T. Herzke, G. Coleman, K. Adiloglu, K. Bomke, K. Plotz, T. Gerkmann, **S. Doclo**, B. Kollmeier, V. Hohmann, M. Dietz, "Comparing binaural pre-processing strategies II: Speech intelligibility of bilateral cochlear implant users," *Trends in Hearing*, vol. 19, pp. 1-18, 2015.
53. E. Hadad, D. Marquardt, **S. Doclo**, S. Gannot, "Theoretical Analysis of Binaural Transfer Function MVDR Beamformers with Interference Cue Preservation Constraints," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 23, no. 12, pp. 2449-2464, Dec. 2015.
54. D. Marquardt, E. Hadad, S. Gannot, **S. Doclo**, "Theoretical Analysis of Linearly Constrained Multi-channel Wiener Filtering Algorithms for Combined Noise Reduction and Binaural Cue Preservation in Binaural Hearing Aids," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 23, no. 12, pp. 2384-2397, Dec. 2015.
55. D. Marquardt, V. Hohmann, **S. Doclo**, "Interaural Coherence Preservation in Multi-channel Wiener Filtering Based Noise Reduction for Binaural Hearing Aids," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 23, no. 12, pp. 2162-2176, Dec. 2015.
56. H. Schepker, J. Rennie, **S. Doclo**, "Speech-in-noise enhancement using amplification and dynamic range compression controlled by the speech intelligibility index," *Journal of the Acoustical Society of America*, vol. 138, no. 5, pp. 2692-2706, Nov. 2015.
57. T. Sankowsky-Rothe, H. Schepker, **S. Doclo**, M. Blau, "Reciprocal measurement of acoustic feedback paths in hearing aids," *Journal of the Acoustical Society of America*, vol. 138, no. 4, EL399-EL404, Oct. 2015.
58. F. Xiong, B. T. Meyer, N. Moritz, R. Rehr, J. Anemuller, T. Gerkmann, **S. Doclo**, S. Goetze, "Front-End Technologies for Robust ASR in Reverberant Environments - Spectral Enhancement-based Dereverberation and Auditory Modulation Filterbank Features," *EURASIP Journal on Advances in Signal Processing*, 2015:70, pp. 1-18.
59. B. Cauchi, I. Kodrasi, R. Rehr, S. Gerlach, A. Jukić, T. Gerkmann, **S. Doclo**, S. Goetze, "Combination of MVDR beamforming and single-channel spectral processing for enhancing noisy and reverberant speech," *EURASIP Journal on Advances in Signal Processing*, 2015:61, pp. 1-12.
60. A. Jukić, T. van Waterschoot, T. Gerkmann, **S. Doclo**, "Multi-channel linear prediction-based speech dereverberation with sparse priors," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 23, no. 9, pp. 1509-1520, Sep. 2015.
61. L. Wang, T. Gerkmann, **S. Doclo**, "Noise Power Spectral Density Estimation Using MaxNSR Blocking Matrix," *IEEE/ACM Trans. Audio, Speech and Language Processing*, vol. 23, no. 9, pp. 1493-1508, Sep. 2015.
62. **S. Doclo**, W. Kellermann, S. Makino, S. Nordholm, "Multichannel signal enhancement algorithms for assisted listening devices," *IEEE Signal Processing Magazine*, vol. 32, no. 2, pp. 18-30, Mar. 2015.
63. N. Mohammadiha, P. Smaragdis, G. Panahandeh, **S. Doclo**, "A State-Space Approach to Dynamic Nonnegative Matrix Factorization," *IEEE Trans. Signal Processing*, vol. 63, no. 4, pp. 949-959, Feb. 2015.
64. T. C. Lawin-Ore, **S. Doclo**, "Analysis of the average performance of the multichannel Wiener filter based noise reduction using statistical room acoustics," *Signal Processing*, vol. 107, pp. 96-108, Feb. 2015.
65. S. Gerlach, J. Bitzer, S. Goetze, **S. Doclo**, "Joint Estimation of Pitch and Direction of Arrival: Improving Robustness and Accuracy for multi speaker scenario," *EURASIP Journal on Audio, Speech and Music Processing*, 2014, 2014:31.
66. E. Rasumow, M. Blau, M. Hansen, S. van de Par, **S. Doclo**, V. Mellert, D. Püschel, "Smoothing individual head-related transfer functions in the frequency and spatial domains," *Journal of the Acoustical Society of America*, vol. 135, no. 4, pp. 2012-2025, Apr. 2014.
67. J. Wouters, **S. Doclo**, R. Koning, T. Francart, "Sound Processing for Better Coding of Monaural and Binaural Cues in Auditory Prostheses," *Proc. IEEE*, vol. 101, no. 9, pp. 1986-1997, Sep. 2013.

68. I. Kodrasi, S. Goetze, **S. Doclo**, "Regularization for Partial Multichannel Equalization for Speech Dereverberation," *IEEE Trans. Audio, Speech and Language Processing*, vol. 21, no. 9, pp. 1879-1890, Sep. 2013.
69. A. Warzybok, J. Rannies, T. Brand, **S. Doclo**, B. Kollmeier, "Effects of spatial and temporal integration of a single early reflection on speech intelligibility," *Journal of the Acoustical Society of America*, vol. 133, no. 1, pp. 269-282, Jan. 2013.
70. B. Cornelis, **S. Doclo**, T. Van den Bogaert, J. Wouters, M. Moonen, "Theoretical analysis of binaural multi-microphone noise reduction techniques", *IEEE Trans. Audio, Speech and Language Processing*, vol. 18, no. 2, pp. 342-355, Feb. 2010.
71. **S. Doclo**, T. Van den Bogaert, M. Moonen, J. Wouters, "Reduced-bandwidth and distributed MWF-based noise reduction algorithms for binaural hearing aids," *IEEE Trans. Audio, Speech and Language Processing*, vol. 17, no. 1, pp. 38-51, Jan. 2009.
72. T. Van den Bogaert, **S. Doclo**, J. Wouters, M. Moonen, "Speech enhancement with multichannel Wiener filter techniques in multimicrophone binaural hearing aids," *Journal of the Acoustical Society of America*, vol. 125, no. 1, pp. 360-371, Jan. 2009.
73. T. Van den Bogaert, **S. Doclo**, J. Wouters, M. Moonen, "The effect of multimicrophone noise reduction systems on sound source localization by users of binaural hearing aids," *Journal of the Acoustical Society of America*, vol. 124, no. 1, pp. 484-497, Jul. 2008.
74. **S. Doclo**, A. Spriet, J. Wouters, M. Moonen, "Frequency-Domain Criterion for the Speech Distortion Weighted Multichannel Wiener Filter for Robust Noise Reduction," *Speech Communication*, special issue on Speech Enhancement, vol. 49, no. 7-8, pp. 636-656, Jul.-Aug. 2007.
75. **S. Doclo**, M. Moonen, "Superdirective Beamforming Robust Against Microphone Mismatch," *IEEE Trans. Audio, Speech and Language Processing*, vol. 15, no. 2, pp. 617-631, Feb. 2007.
76. J. Chen, J. Benesty, Y. Huang, **S. Doclo**, "New Insights Into the Noise Reduction Wiener Filter," *IEEE Trans. Audio, Speech and Language Processing*, vol. 14, no. 4, pp. 1218-1234, Jul. 2006.
77. **S. Doclo**, M. Moonen, "On the Output SNR of the Speech-Distortion Weighted Multichannel Wiener Filter," *IEEE Signal Processing Letters*, vol. 12, no. 12, pp. 809-811, Dec. 2005.
78. **S. Doclo**, M. Moonen, "Multi-Microphone Noise Reduction Using Recursive GSVD-Based Optimal Filtering with ANC Postprocessing Stage," *IEEE Trans. Speech and Audio Processing*, vol. 13, no. 1, pp. 53-69, Jan. 2005.
79. S. Bex, **S. Doclo**, G. Ysebaert, G. Gielen, W. Dehaene, H. De Man, B. De Moor, "The PeopleMover educational project," *IEEE Control Systems Magazine*, vol. 24, no. 5, pp. 83-87, Oct. 2004.
80. **S. Doclo**, M. Moonen, "Design of far-field and near-field broadband beamformers using eigenfilters," *Signal Processing*, vol. 83, no. 12, pp. 2641-2673, Dec. 2003.
81. **S. Doclo**, M. Moonen, "Design of broadband beamformers robust against gain and phase errors in the microphone array characteristics," *IEEE Trans. Signal Processing*, vol. 51, no. 10, pp. 2511-2526, Oct. 2003.
82. **S. Doclo**, M. Moonen, "Robust adaptive time delay estimation for speaker localisation in noisy and reverberant acoustic environments," *EURASIP Journal on Applied Signal Processing*, vol. 2003, no. 11, pp. 1110-1124, Oct. 2003.
83. **S. Doclo**, M. Moonen, "GSVD-based Optimal Filtering for Single and Multimicrophone Speech Enhancement," *IEEE Trans. Signal Processing*, vol. 50, no. 9, pp. 2230-2244, Sep. 2002.

### Contribution to Book

1. **S. Doclo**, S. Gannot, D. Marquardt, E. Hadad, "Binaural Speech Processing with Application to Hearing Devices", chapter 18 in *Audio Source Separation and Speech Enhancement* (E. Vincent, T. Virtanen, S. Gannot, eds.), Wiley, 2018 (ISBN: 978-1-119-27989-1).
2. **S. Doclo**, S. Gannot, M. Moonen, A. Spriet, "Acoustic beamforming for hearing aid applications," chapter 9 in *Handbook on Array Processing and Sensor Networks* (S. Haykin, K. J. Ray Liu, eds.), pp. 269-302, Wiley, 2010 (ISBN: 978-0-470-37176-3).

3. K. Eneman, A. Leijon, **S. Doclo**, A. Spriet, M. Moonen, J. Wouters, “Auditory-profile-based Physical Evaluation of Multi-microphone Noise Reduction Techniques in Hearing Instruments,” chapter 15 in *Advances in Digital Speech Transmission* (R. Martin, U. Heute, C. Antweiler, eds.), pp. 431-458, Wiley, 2008 (ISBN: 978-0-470-51739-0).
4. A. Spriet, **S. Doclo**, M. Moonen, J. Wouters, “Feedback control in hearing aids,” chapter 48 in *Handbook of Speech Processing and Speech Communication* (J. Benesty, M. Sondhi, Y. Huang, eds.), pp. 979-1000, Springer, 2008 (ISBN: 978-3-540-49125-5).
5. **S. Doclo**, A. Spriet, J. Wouters, M. Moonen, “Speech Distortion Weighted Multi-channel Wiener Filtering Techniques for Noise Reduction,” chapter 9 in *Speech Enhancement* (J. Benesty, S. Makino, J. Chen, eds.), pp. 199-228, Springer, 2005 (ISBN: 3-540-24039-X).
6. J. Benesty, J. Chen, Y. Huang, **S. Doclo**, “Study of the Wiener Filter for Noise Reduction,” chapter 2 in *Speech Enhancement* (J. Benesty, S. Makino, J. Chen, eds.), pp. 9-42, Springer, 2005 (ISBN: 3-540-24039-X).
7. **S. Doclo**, M. Moonen, “GSVD-Based Optimal Filtering for Multi-Microphone Speech Enhancement,” chapter 6 in *Microphone Arrays: Signal Processing Techniques and Applications* (M. Brandstein, D. Ward, eds.), pp. 111-132, Springer, 2001 (ISBN: 3-540-41953-5).

### Dissertations

1. **S. Doclo**, Multi-microphone noise reduction and dereverberation techniques for speech applications, PhD thesis, Katholieke Universiteit Leuven, Belgium, May 2003.

### Editorials

1. S. Nordholm, W. Kellermann, **S. Doclo**, V. Valimaki, S. Makino, J. Hershey, Editorial Special issue on Signal Processing Techniques for Assisted Listening, *IEEE Signal Processing Magazine*, vol. 32, no. 2, pp. 16-17, Mar. 2015.
2. A. Bertrand, **S. Doclo**, S. Gannot, N. Ono, T. van Waterschoot, Editorial Special issue on wireless acoustic sensor networks and ad hoc microphone arrays, *Signal Processing*, vol. 107, pp. 1-3, Feb. 2015.
3. S. Nordholm, T. Abhayapala, **S. Doclo**, S. Gannot, P. Naylor, I. Tashev, Editorial Special Issue on Microphone Array Speech Processing, *EURASIP Journal on Advances in Signal Processing*, vol. 2010, Article ID 694216, 3 pages.
4. S. Gannot, J. Benesty, J. Bitzer, I. Cohen, **S. Doclo**, R. Martin, S. Nordholm, Editorial Special Issue on Advances in Multi-Microphone Speech Processing, *EURASIP Journal on Applied Signal Processing*, vol. 2006, Article ID 46357, 3 pages.
5. **S. Doclo**, S. H. Jensen, P. A. Pango, S. K. Riis, J. Wouters, Editorial Special Issue on DSP in Hearing Aids and Cochlear Implants, *EURASIP Journal on Applied Signal Processing*, vol. 2005, no. 18, pp. 2911-2914, Oct. 2005.

### Peer-Reviewed conference proceedings

1. A. Lohmann, T. van Waterschoot, J. Bitzer, **S. Doclo**, Dereverberation in Acoustic Sensor Networks using Weighted Prediction Error with Microphone-dependent Prediction Delays, in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Rhodes, Greece, June 2023.
2. U. Kowalk, **S. Doclo**, J. Bitzer, Geometry-aware DoA Estimation using a Deep Neural Network with mixed-data input features, in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Rhodes, Greece, June 2023.
3. D. Fejgin, **S. Doclo**, Assisted RTF-Vector-Based Binaural Direction of Arrival Estimation Exploiting a Calibrated External Microphone Array, in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Rhodes, Greece, June 2023.
4. P. Rivera Benois, R. Roden, M. Blau, **S. Doclo**, Optimization methods for fixed virtual sensing feedback ANC controllers targeting in-ear headphones, in *Proc. International Congress on Acoustics (ICA)*, Gyeongju, South Korea, Oct. 2022.

5. M. Tammen, X. Li, **S. Doclo**, L. Theverapperuma, Dictionary-Based Fusion of Contact and Acoustic Microphones for Wind Noise Reduction, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
6. M. Ohlenbusch, C. Rollwage, **S. Doclo**, Training Strategies for Own Voice Reconstruction in Hearing Protection Devices using an In-ear Microphone, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
7. K. Müller, **S. Doclo**, J. Østergaard, T. Wolff, Model-Based Estimation of In-Car-Communication Feedback Applied to Speech Zone Detection, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
8. U. Kowalk, **S. Doclo**, J. Bitzer, Signal-informed DNN-based DOA estimation combining an external microphone and GCC-PHAT features, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
9. E. Hadad, **S. Doclo**, S. Nordholm, S. Gannot, Pareto optimal binaural MVDR beamformer with controllable interference suppression, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
10. R. Sinha, M. Tammen, C. Rollwage, **S. Doclo**, Speaker-conditioning single-channel target speaker extraction using conformer-based architectures, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
11. M. Tammen, **S. Doclo**, Deep Multi-Frame MVDR Filtering For Binaural Noise Reduction, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
12. K. Brümman, **S. Doclo**, 3D Single Source Localization Based on Euclidean Distance Matrices, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
13. D. Fejgin, **S. Doclo**, Coherence-Based Frequency Subset Selection For Binaural RTF-Vector-Based Direction of Arrival Estimation for Multiple Speakers, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
14. W. Middelberg, **S. Doclo**, Bias Analysis of Spatial Coherence-Based RTF Vector Estimation for Acoustic Sensor Networks in a Diffuse Sound Field, in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Bamberg, Germany, Sep. 2022.
15. L. Kramer, C. F. da Silva Souto, J. Bartels, S. Debener, **S. Doclo**, A. Winneke, Acoustic stimulation during deep sleep using a mobile EEG system at home, *Neuroadaptive Technology Conference*, Lübbenau, Germany, Oct. 2022, pp. 34-36.
16. H. Gode, **S. Doclo**, Adaptive Dereverberation, Noise and Interferer Reduction Using Sparse Weighted Linearly Constrained Minimum Power Beamforming, in *Proc. European Signal Processing Conference (EUSIPCO)*, Belgrade, Serbia, Aug. 2022, pp. 95-99.
17. P. Rivera Benois, R. Roden, M. Blau, **S. Doclo**, "Optimization of a Fixed Virtual Sensing Feedback ANC Controller for In-Ear Headphones with Multiple Loudspeakers," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Singapore, May 2022, pp. 8717-8721.
18. S. Shishkin, D. Hollosi, **S. Doclo**, S. Goetze, "Active Learning for Sound Event Classification using Monte-Carlo Dropout and PANN Embeddings," in *Proc. Workshop on Detection and Classification of Acoustic Scenes and Events (DCASE)*, Nov. 2021, pp. 150-154.
19. K. Brümman, D. Fejgin, **S. Doclo**, "Data-Dependent Initialization for ECM-Based Blind Geometry Estimation of a Microphone Array Using Reverberant Speech," in *Proc. ITG Conference on Speech Communication*, Sep. 2021, pp. 74-78.
20. R. Sinha, M. Tammen, C. Rollwage, **S. Doclo**, "Speaker-conditioned target speaker extraction based on customized LSTM cells," in *Proc. ITG Conference on Speech Communication*, Sep. 2021, pp. 89-93.
21. W. Middelberg, **S. Doclo**, "Comparison of Generalized Sidelobe Canceller Structures Incorporating External Microphones for Joint Noise and Interferer Reduction," in *Proc. ITG Conference on Speech Communication*, Sep. 2021, pp. 104-108.

22. H. Gode, M. Tammen, **S. Doclo**, “Joint Multi-Channel Dereverberation and Noise Reduction Using a Unified Convolutional Beamformer With Sparse Priors,” in *Proc. ITG Conference on Speech Communication*, Sep. 2021, pp. 144-148.
23. M. Tammen, H. Gode, H. Kayser, E. J. Nustede, N. L. Westhausen, J. Anemüller, **S. Doclo**, “Combining weighted binaural LCMP beamforming and deep multi-frame filtering for joint dereverberation and interferer reduction,” in *Proc. International Clarity Workshop on Machine Learning Challenges for Hearing Aids*, Sep. 2021.
24. D. Fejgin, **S. Doclo**, “Comparison of Binaural RTF-Vector-Based Direction of Arrival Estimation Methods Exploiting an External Microphone,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Aug. 2021, pp. 241-245.
25. P. Rivera Benois, R. Roden, M. Blau, **S. Doclo**, “Sound pressure minimization at the ear drum for in-ear ANC headphones using a fixed feedforward remote microphone technique,” in *Proc. International Congress on Sound and Vibration (ICSV)*, Jul. 2021.
26. M. Tammen, **S. Doclo**, “Deep multi-frame MVDR filtering for single-microphone speech enhancement,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Jun. 2021, pp. 8443-8447.
27. M. Fallahi, M. Hansen, S. van de Par, **S. Doclo**, D. Püschel, M. Blau, “Localization performance for binaural signals generated with a virtual artificial head in the absence of visual cues,” in *Proc. Forum Acusticum*, Dec. 2020, pp. 1937-1944.
28. F. Bederna, H. Schepker, C. Rollwage, **S. Doclo**, A. Pusch, J. Bitzer, J. Rennies, “Adaptive compressive onset-enhancement for improved speech intelligibility in noise and reverberation,” in *Proc. Interspeech*, Shanghai, China, Oct. 2020, pp. 1351-1355.
29. A. Aroudi, M. Delcroix, T. Nakatani, K. Kinoshita, S. Araki, **S. Doclo**, “Cognitive-driven convolutional beamforming using EEG-based auditory attention decoding,” in *Proc. IEEE International Workshop on Machine Learning for Signal Processing*, Espoo, Finland, Sep. 2020.
30. M. Tammen, D. Fischer, B. T. Meyer, **S. Doclo**, “DNN-based speech presence probability estimation for multi-frame single-microphone speech enhancement,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Barcelona, Spain, May 2020, pp. 191-195.
31. R. Varzandeh, K. Adiloglu, **S. Doclo**, V. Hohmann, “Exploiting periodicity features for joint detection and DOA estimation of speech sources using convolutional neural networks,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Barcelona, Spain, May 2020, pp. 566-570.
32. D. Fischer, **S. Doclo**, “Subspace-based speech correlation vector estimation for single-microphone multi-frame MVDR filtering,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Barcelona, Spain, May 2020, pp. 856-860.
33. A. Aroudi, T. de Tallez, **S. Doclo**, “Improving auditory attention decoding performance of linear and non-linear methods using state-space model,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Barcelona, Spain, May 2020, pp. 8703-8707.
34. M. Fallahi, M. Hansen, S. van de Par, **S. Doclo**, D. Püschel, M. Blau, “Localization performance in the absence of visual cues for binaural renderings generated with a Virtual Artificial Head,” in *Proc. German Annual Conference on Acoustics (DAGA)*, Hannover, Germany, Mar. 2020, pp. 106-109.
35. N. Göbbling, W. Middelberg, **S. Doclo**, “RTF-steered Binaural MVDR Beamforming Incorporating Multiple External Microphones,” in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2019, pp. 368-372.
36. H. Schepker, **S. Doclo**, “Active Feedback Suppression for Hearing Devices Exploiting Multiple Loudspeakers,” in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2019, pp. 60-64.
37. M. Fallahi, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, M. Blau, “Individualized dynamic binaural auralization of classroom acoustics using a virtual artificial head,” in *Proc. International Congress on Acoustics (ICA)*, Aachen, Germany, Sep. 2019, pp. 731-738.

38. D. Fischer, K. Brümman, **S. Doclo**, “Comparison of Parameter Estimation Methods for Single-Microphone Multi-Frame Wiener Filtering,” in *Proc. European Signal Processing Conference (EUSIPCO)*, A Coruña, Spain, Sep. 2019.
39. H. Schepker, F. Denk, B. Kollmeier, **S. Doclo**, “Subjective sound quality evaluation of an acoustically transparent hearing device,” in *Proc. AES Conference on Headphone Technology*, San Francisco, USA, Aug. 2019.
40. F. Denk, M. Lettau, H. Schepker, **S. Doclo**, R. Roden, M. Blau, J.-H. Bach, J. Wellmann, B. Kollmeier, “A one-size-fits-all earpiece with multiple microphones and drivers for hearing device research,” in *Proc. AES Conference on Headphone Technology*, San Francisco, USA, Aug. 2019.
41. A. Aroudi, **S. Doclo**, “Cognitive-driven binaural LCMV beamformer using EEG-based auditory attention decoding,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brighton, UK, May 2019, pp. 406-410.
42. N. Gößling, **S. Doclo**, “RTF-steered binaural MVDR beamforming incorporating an external microphone for dynamic acoustic scenarios,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brighton, UK, May 2019, pp. 416-420.
43. M. Tammen, I. Kodrasi, **S. Doclo**, “Joint estimation of RETF vector and power spectral densities for speech enhancement based on alternating least squares,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brighton, UK, May 2019, pp. 795-799.
44. K. Brümman, D. Fischer, **S. Doclo**, “Performance Comparison of Single Channel Speech Enhancement using Speech-Distortion Weighted Inter-Frame Wiener Filters,” in *Proc. German Annual Conference on Acoustics (DAGA)*, Rostock, Germany, Mar. 2019, pp. 966-969.
45. M. Fallahi, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, M. Blau, “Binaural reproduction of signals captured in a reverberant room with a virtual artificial head,” in *Proc. German Annual Conference on Acoustics (DAGA)*, Rostock, Germany, Mar. 2019.
46. H. Schepker, F. Denk, B. Kollmeier, **S. Doclo**, “Multi-loudspeaker equalization for acoustic transparency in a custom hearing device,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 36-40.
47. N. Gößling, **S. Doclo**, “RTF-Based Binaural MVDR Beamformer Exploiting an External Microphone in a Diffuse Noise Field,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 106-110.
48. D. Fischer, **S. Doclo**, “Evaluation of Robust Constrained MFMVDR Filtering for Single-Channel Speech Enhancement,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 156-160.
49. R. Ranjbarian, **S. Doclo**, H. R. Abutalebi, “Distributed MAP Estimators for Noise Reduction in Fully Connected Wireless Acoustic Sensor Networks,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 166-170.
50. M. Tammen, I. Kodrasi, **S. Doclo**, “Iterative Alternating Least-Squares Approach to Jointly Estimate the RETFs and the Diffuse PSD,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 221-225.
51. F. Denk, H. Schepker, **S. Doclo**, B. Kollmeier, “Equalization filter design for achieving acoustic transparency in semi-open fit hearing device,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 226-230.
52. J. Klug, D. Marquardt, N. Gößling, **S. Doclo**, “Evaluation of Signal-Dependent Partial Noise Estimation Algorithms for Binaural Hearing Aids,” in *Proc. ITG Conference on Speech Communication*, Oldenburg, Germany, Oct. 2018, pp. 236-240.
53. D. Fischer, **S. Doclo**, “Robust constrained MFMVDR filtering for single-microphone speech enhancement,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Tokyo, Japan, Sep. 2018, pp. 41-45.
54. N. Gößling, **S. Doclo**, “Relative transfer function estimation exploiting spatially separated microphones in a diffuse noise field,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Tokyo, Japan, Sep. 2018, pp. 146-150.

55. L. T. T. Tran, H. Schepker, **S. Doclo**, H. H. Dam, S. Nordholm, "Frequency domain improved practical variable step-size for adaptive feedback cancellation using pre-filters," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Tokyo, Japan, Sep. 2018, pp. 171-175.
56. T. Dietzen, **S. Doclo**, M. Moonen, T. van Waterschoot, "Joint multi-microphone speech dereverberation and noise reduction using integrated sidelobe cancellation and linear prediction," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Tokyo, Japan, Sep. 2018, pp. 221-225.
57. N. Gößling, D. Marquardt, I. Merks, T. Zhang, **S. Doclo**, "Optimal binaural LCMV beamforming in complex acoustic scenarios: theoretical and practical insights," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Tokyo, Japan, Sep. 2018, pp. 381-385.
58. H. Schepker, L. T. T. Tran, S. E. Nordholm, **S. Doclo**, "Acoustic feedback cancellation for hearing aids using a fixed RTF-constrained null-steering beamformer," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Tokyo, Japan, Sep. 2018, pp. 431-435.
59. R. Ranjbaryan, H. R. Abutalebi, **S. Doclo**, "Reduced-Complexity Semi-Distributed Multi-Channel Multi-Frame MVDR Filter," in *Proc. European Signal Processing Conference (EUSIPCO)*, Rome, Italy, Sep. 2018.
60. M. Fallahi, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, M. Blau, "Individual binaural reproduction of music recordings using a virtual artificial head," in *Proc. AES International Conference on Spatial Reproduction*, Tokyo, Japan, Aug. 2018.
61. I. Kodrasi, **S. Doclo**, "Joint late reverberation and noise power spectral density estimation in a spatially homogeneous noise field," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Calgary, Canada, Apr. 2018, pp. 441-445.
62. M. Tammen, I. Kodrasi, **S. Doclo**, "Complexity reduction of eigenvalue decomposition-based diffuse power spectral density estimators using the power method," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Calgary, Canada, Apr. 2018, pp. 451-455.
63. A. Aroudi, D. Marquardt, **S. Doclo**, "EEG-based auditory attention decoding using steerable binaural superdirective beamformer," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Calgary, Canada, Apr. 2018, pp. 851-855.
64. M. Fallahi, M. Blau, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, "Constrained optimization for binaural sound reproduction using a virtual artificial head," in *Proc. German Annual Conference on Acoustics (DAGA)*, Munich, Germany, Mar. 2018, pp. 1-4.
65. L. T. T. Tran, H. Schepker, **S. Doclo**, H. H. Dam, S. E. Nordholm, "Adaptive Feedback Control using Improved Variable Step-Size Affine Projection Algorithm for Hearing Aids," in *Proc. Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA)*, Kuala Lumpur, Malaysia, Dec. 2017, pp. 1633-1640.
66. D. Marquardt, **S. Doclo**, "Noise Power Spectral Density Estimation for Binaural Noise Reduction Exploiting Direction of Arrival Estimates," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2017, pp. 234-238.
67. I. Kodrasi, **S. Doclo**, "Multi-channel Late Reverberation Power Spectral Density Estimation Based on Nuclear Norm Minimization," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2017, pp. 101-105.
68. T. Dietzen, **S. Doclo**, A. Spriet, W. Tirry, M. Moonen, T. van Waterschoot, "Low Complexity Kalman Filter for Multi-Channel Linear Prediction Based Blind Speech Dereverberation," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2017 pp. 284-288.
69. Y. Zhao, J. R. Jensen, M. G. Christensen, **S. Doclo**, J. Chen, "Experimental Study of Robust Beamforming Techniques for Acoustic Applications," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2017, pp. 86-90.
70. A. Aroudi, **S. Doclo**, "EEG-based Auditory Attention Decoding: Impact of Reverberation, Noise and Interference Reduction," in *Proc. IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, Banff, Canada, Oct. 2017, pp. 3042-3047.



71. K. Siedenburg, **S. Doclo**, “Iterative structured shrinkage algorithms for stationary/transient audio decomposition,” in *Proc. International Conference on Digital Audio Effects (DAFx)*, Edinburgh, UK, Sep. 2017, pp. 283-290.
72. D. Fischer, **S. Doclo**, “Sensitivity Analysis of the Multi-Frame MVDR Filter for Single-Microphone Speech Enhancement,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Kos, Greece, Sep. 2017, pp. 633-637.
73. H. Schepker, L. T. T. Tran, S. Nordholm, **S. Doclo**, “Combining Null-Steering and Adaptive Filtering for Acoustic Feedback Cancellation in a Multi-Microphone Earpiece,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Kos, Greece, Sep. 2017, pp. 241-245.
74. F. Denk, S. Vogl, H. Schepker, B. Kollmeier, M. Blau, **S. Doclo**, “The Acoustically Transparent Hearing Device: Towards Integration of Individualized Sound Equalization, Electro-Acoustic Modeling and Feedback Cancellation,” in *Proc. International Workshop on Challenges in Hearing Assistive Technology (CHAT)*, Stockholm, Sweden, Aug. 2017.
75. I. Kodrasi, D. Marquardt, **S. Doclo**, “A Simulation Study on Binaural Dereverberation and Noise Reduction based on Diffuse Power Spectral Density Estimators,” in *Proc. International Workshop on Challenges in Hearing Assistive Technology (CHAT)*, Stockholm, Sweden, Aug. 2017.
76. N. Gößling, D. Marquardt, **S. Doclo**, “Comparison of RTF Estimation Methods between a Head-Mounted Binaural Hearing Device and an External Microphone,” in *Proc. International Workshop on Challenges in Hearing Assistive Technology (CHAT)*, Stockholm, Sweden, Aug. 2017, pp. 101-106.
77. M. Fallahi, M. Blau, M. Hansen, **S. Doclo**, S. van de Par, D. Püschel, “Optimizing the microphone array size for a virtual artificial head,” in *Proc. International Symposium on Auditory and Audiological Research*, Nyborg, Denmark, Aug. 2017, pp. 359-366.
78. A. Aroudi, **S. Doclo**, “EEG-based Auditory Attention Decoding Using Unprocessed Binaural Signals in Reverberant and Noisy Conditions,” in *Proc. International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Jeju Island, Korea, Jul. 2017, pp. 484-488.
79. L. Gerlach, G. Paya-Vaya, S. Liu, M. Weißbrich, H. Blume, D. Marquardt, **S. Doclo**, “Analyzing the Trade-Off between Power Consumption and Beamforming Algorithmic Performance using a Hearing Aid ASIP,” in *Proc. IEEE International Conference on Embedded Computer Systems: Architectures, Modeling, and Simulation*, Samos, Greece, Jul. 2017.
80. I. Kodrasi, **S. Doclo**, “Late reverberant power spectral density estimation based on an eigenvalue decomposition,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, New Orleans, USA, Mar. 2017, pp. 611-615.
81. E. Hadad, D. Marquardt, W. Pu, S. Gannot, **S. Doclo**, Z.-Q. Luo, I. Merks, T. Zhang, “Comparison of two binaural beamforming approaches for hearing aids,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, New Orleans, USA, Mar. 2017, pp. 236-240.
82. H. Schepker, L. T. T. Tran, S. Nordholm, **S. Doclo**, “Null-steering beamformer for acoustic feedback cancellation in a multi-microphone earpiece optimizing the maximum stable gain,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, New Orleans, USA, Mar. 2017, pp. 341-345.
83. L. T. T. Tran, H. Schepker, **S. Doclo**, H. H. Dam, S. E. Nordholm, “Proportionate NLMS for adaptive feedback control in hearing aids,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, New Orleans, USA, Mar. 2017, pp. 211-215.
84. H. A. Javed, B. Cauchi, **S. Doclo**, P. A. Naylor, S. Goetze, “Measuring, modelling and predicting perceived reverberation,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, New Orleans, USA, Mar. 2017, pp. 381-385.
85. I. Kodrasi, **S. Doclo**, “EVD-based multi-channel dereverberation of a moving speaker using different RETF estimation methods,” in *Proc. Joint Workshop on Hands-free Speech Communication and Microphone Arrays (HSCMA)*, San Francisco, USA, Mar. 2017, pp. 116-120.
86. N. Gößling, D. Marquardt, **S. Doclo**, “Performance analysis of the extended binaural MVDR beamformer with partial noise estimation in a homogeneous noise field,” in *Proc. Joint Workshop on Hands-free Speech Communication and Microphone Arrays (HSCMA)*, San Francisco, USA, Mar. 2017, pp. 1-5.

87. F. Xiong, B. T. Meyer, B. Cauchi, A. Jukic, **S. Doclo**, S. Goetze, "Performance comparison of real-time single-channel speech dereverberation algorithms," in *Proc. Joint Workshop on Hands-free Speech Communication and Microphone Arrays (HSCMA)*, San Francisco, USA, Mar. 2017, pp. 126-130.
88. M. Fallahi, M. Hansen, **S. Doclo**, S. van de Par, V. Mellert, D. Püschel, M. Blau, "High spatial resolution binaural sound reproduction using a virtual artificial head," in *Proc. German Annual Conference on Acoustics (DAGA)*, Kiel, Germany, Mar. 2017, pp. 1061-1064.
89. L. T. T. Tran, H. Schepker, **S. Doclo**, H. H. Dam, S. E. Nordholm, "Improved Practical Variable Step-Size Algorithm For Adaptive Feedback Control in Hearing Aids," in *Proc. International Conference on Signal Processing and Communication Systems*, Gold Coast, Australia, Dec. 2016, pp. 1-8.
90. E. Hadad, D. Marquardt, **S. Doclo**, S. Gannot, "Comparison of binaural multichannel Wiener filters with binaural cue preservation of the interferer," in *Proc. IEEE Convention of Electrical and Electronics Engineers in Israel*, Eilat, Israel, Nov. 2016.
91. H. Schepker, L. T. T. Tran, S. Nordholm, **S. Doclo**, "A Robust Null-Steering Beamformer for Acoustic Feedback Cancellation for a Multi-Microphone Earpiece," in *Proc. ITG Conference on Speech Communication*, Paderborn, Germany, Oct. 2016, pp. 165-169.
92. D. Marquardt, **S. Doclo**, "Performance Comparison of Bilateral and Binaural MVDR-based Noise Reduction Algorithms in the Presence of DOA Estimation Errors," in *Proc. ITG Conference on Speech Communication*, Paderborn, Germany, Oct. 2016, pp. 130-134.
93. B. Cauchi, J. F. Santos, K. Siedenbueg, T. H. Falk, P. A. Naylor, **S. Doclo**, S. Goetze, "Predicting the quality of processed speech by combining modulation based features and model-trees," in *Proc. ITG Conference on Speech Communication*, Paderborn, Germany, Oct. 2016, pp. 180-184.
94. D. Fischer, **S. Doclo**, E. A. P. Habets, T. Gerkmann, "Combined Single-Microphone Wiener and MVDR Filtering based on Speech Interframe Correlations and Speech Presence Probability," in *Proc. ITG Conference on Speech Communication*, Paderborn, Germany, Oct. 2016, pp. 292-296.
95. A. Jukić, Z. Wang, T. van Waterschoot, T. Gerkmann, **S. Doclo**, "Constrained multi-channel linear prediction for adaptive speech dereverberation," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Xi'an, China, Sep. 2016.
96. H. Schepker, L. T. T. Tran, S. Nordholm, **S. Doclo**, "Acoustic Feedback Cancellation for a Multi-Microphone Earpiece based on a Null-Steering Beamformer," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Xi'an, China, Sep. 2016.
97. T. Dietzen, A. Spriet, W. Tirry, **S. Doclo**, M. Moonen, T. van Waterschoot, "Partitioned Block Frequency Domain Kalman Filter for Multi-Channel Linear Prediction Based Blind Speech Dereverberation," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Xi'an, China, Sep. 2016.
98. A. Avila, B. Cauchi, S. Goetze, **S. Doclo**, T. Falk, "Performance comparison of intrusive and non-intrusive instrumental quality measures for enhanced speech," in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Xi'an, China, Sep. 2016.
99. E. Hadad, **S. Doclo**, S. Gannot, "A generalized binaural MVDR beamformer with interferer relative transfer function preservation," in *Proc. European Signal Processing Conference (EUSIPCO)*, Budapest, Hungary, Aug. 2016, pp. 1643-1647.
100. Y. Biderman, S. Gannot, **S. Doclo**, B. Rafaely, "Efficient Relative Transfer Function Estimation Framework in the Spherical Harmonics Domain," in *Proc. European Signal Processing Conference (EUSIPCO)*, Budapest, Hungary, Aug. 2016, pp. 1658-1662.
101. D. Marquardt, E. Hadad, S. Gannot, **S. Doclo**, "Incorporating Relative Transfer Function Preservation into the Binaural Multi-channel Wiener Filter for Hearing Aids," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 6500-6504.
102. E. Hadad, D. Marquardt, **S. Doclo**, S. Gannot, "Extensions of the binaural MWF with interference reduction preserving the binaural cues of the interfering source," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 241-245.

103. I. Kodrasi, A. Jukic, **S. Doclo**, “Robust sparsity-promoting acoustic multi-channel equalization for speech dereverberation,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 166-170.
104. A. Kuklasinski, **S. Doclo**, J. Jensen, “Maximum Likelihood PSD Estimation for Speech Enhancement in Reverberant and Noisy Conditions,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 599-603.
105. B. Cauchi, H. Javed, T. Gerkmann, **S. Doclo**, S. Goetze, P. Naylor, “Perceptual instrumental evaluation of the perceived level of reverberation,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 629-633.
106. H. Schepker, L. T. T. Tran, S. Nordholm, **S. Doclo**, “Improving adaptive feedback cancellation in hearing aids using an affine combination of filters,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 231-235.
107. A. Aroudi, B. Mirkovic, M. De Vos, **S. Doclo**, “Auditory attention decoding with EEG recordings using noisy acoustic reference signals,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Shanghai, China, Mar. 2016, pp. 694-698.
108. I. Kodrasi, **S. Doclo**, “Incorporating the Noise Statistics in Acoustic Multi-Channel Equalization,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
109. A. Kuklasinski, **S. Doclo**, S. H. Jensen, J. Jensen, “Multichannel Wiener Filter for Speech Dereverberation in Hearing Aids - Sensitivity to DoA Errors,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
110. A. Jukic, T. van Waterschoot, T. Gerkmann, **S. Doclo**, “A framework for multi-channel speech dereverberation by exploiting sparsity,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
111. B. Cauchi, T. Gerkmann, **S. Doclo**, P. A. Naylor, S. Goetze, “Spectrally and spatially informed noise suppression using beamforming and convolutive NMF,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
112. M. Hu, D. Sharma, **S. Doclo**, M. Brookes, P. A. Naylor, “Blind adaptive SIMO acoustic system identification using a locally optimal step-size,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
113. N. K. Desiraju, **S. Doclo**, M. Buck, T. Gerkmann, T. Wolff, “On Determining Optimal Reverberation Parameters for Late Residual Echo Suppression,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
114. T. Dietzen, A. Spriet, W. Tirry, **S. Doclo**, M. Moonen, T. van Waterschoot, “On the Relation between Data-Dependent Beamforming and Multichannel Linear Prediction for Dereverberation,” in *Proc. AES 60th Conference on Dereverberation and Reverberation of Audio, Music, and Speech*, Leuven, Belgium, Feb. 2016.
115. L. T. T. Tran, H. H. Dam, H. Schepker, **S. Doclo**, S. E. Nordholm, “Evaluation of Two-microphone Acoustic Feedback Cancellation Using Uniform and Non-uniform Sub-bands in Hearing Aids,” in *Proc. Asia-Pacific Signal and Information Processing Association Annual Summit and Conference (APSIPA)*, Hong Kong, Dec. 2015, pp. 308-313.
116. A. Jukić, T. van Waterschoot, T. Gerkmann, **S. Doclo**, “Group sparsity for MIMO speech dereverberation,” in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2015, pp. 1-5.
117. M. Hu, P. Peso Parada, D. Sharma, **S. Doclo**, T. van Waterschoot, M. Brookes, P. A. Naylor, “Single-channel speaker diarization based on spatial features,” in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz, USA, Oct. 2015, pp. 1-5.
118. H. Schepker, D. Hülsmeyer, J. Rannies, **S. Doclo**, “Model-based integration of reverberation for noise-adaptive near-end listening enhancement,” in *Proc. Interspeech*, Dresden, Germany, Sep. 2015, pp. 75-79.

119. J. Thiemann, **S. Doclo**, S. van de Par, “Features for speaker localization in multichannel bilateral hearing aids,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Nice, France, Aug. 2015, pp. 1276-1280.
120. T. Dietzen, N. Huleihel, A. Spriet, W. Tirry, **S. Doclo**, M. Moonen, T. van Waterschoot, “Speech dereverberation by data-dependent beamforming with signal pre-whitening,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Nice, France, Aug. 2015, pp. 2506-2510.
121. M. Hu, **S. Doclo**, D. Sharma, M. Brookes, P. A. Naylor, “Noise-robust blind system identification algorithms based on a Rayleigh quotient cost function,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Nice, France, Aug. 2015, pp. 2521-2525.
122. B. Cauchi, P. Naylor, T. Gerkmann, **S. Doclo**, S. Goetze, “Late reverberant spectral variance estimation using acoustic channel equalization,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Nice, France, Aug. 2015, pp. 2526-2530.
123. W. Nogueira, M. Lopez, T. Rode, **S. Doclo**, A. Büchner, “Individualizing a monaural beamformer for cochlear implant users,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 5738-5742.
124. M. Hu, D. Sharma, **S. Doclo**, M. Brookes, P. A. Naylor, “Speaker change detection and speaker diarization using spatial information,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 5743-5747.
125. A. Kuklasinski, **S. Doclo**, T. Gerkmann, S. H. Jensen, J. Jensen, “Multi-channel PSD estimators for speech dereverberation - A theoretical and experimental comparison,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 91-95.
126. N. Mohammadiha, P. Smaragdis, **S. Doclo**, “Joint Acoustic And Spectral Modeling for Speech Dereverberation Using Non-Negative Representations,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 4410-4414.
127. A. Asaei, N. Mohammadiha, M. J. Taghizadeh, **S. Doclo**, H. Bourslard, “On Application of Non-Negative Matrix Factorization for Ad Hoc Microphone Array Calibration From Incomplete Noisy Distances,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 2694-2698.
128. E. Hadad, D. Marquardt, **S. Doclo**, S. Gannot, “Binaural multichannel Wiener filter with directional interference rejection,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 644-648.
129. D. Marquardt, V. Hohmann, **S. Doclo**, “Interaural Coherence preservation in MWF-based binaural noise reduction algorithms using partial noise estimation,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 654-658.
130. A. Jukić, N. Mohammadiha, T. van Waterschoot, T. Gerkmann, **S. Doclo**, “Multi-channel linear prediction-based speech dereverberation with low-rank power spectrogram approximation,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 96-100.
131. H. Schepker, **S. Doclo**, “Common Part Estimation of Acoustic Feedback Paths in Hearing Aids Optimizing Maximum Stable Gain,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 649-653.
132. I. Kodrasi, D. Marquardt, **S. Doclo**, “Curvature based optimization of the trade-off parameter in the speech distortion weighted multichannel Wiener filter,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Brisbane, Australia, Apr. 2015, pp. 315-319.
133. T. C. Lawin-Ore, S. Stenzel, J. Freudenberger, **S. Doclo**, “Generalized Multichannel Wiener Filter for Spatially Distributed Microphones,” in *Proc. ITG Conference on Speech Communication*, Erlangen, Germany, Sep. 2014.
134. N. K. Desiraju, **S. Doclo**, T. Gerkmann, T. Wolff, “Efficient Multi-Channel Acoustic Echo Cancellation Using Constrained Sparse Filter Updates in the Subband Domain,” in *Proc. ITG Conference on Speech Communication*, Erlangen, Germany, Sep. 2014.

135. N. Mohammadiha, **S. Doclo**, “Single-channel Dynamic Exemplar-based Speech Enhancement,” in *Proc. Interspeech*, Singapore, Sep. 2014, pp. 2690-2694.
136. S. Braun, M. Torcoli, D. Marquardt, E. A. P. Habets, **S. Doclo**, “Multichannel dereverberation for hearing aids with interaural coherence preservation,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 125-129.
137. A. Jukić, T. van Waterschoot, T. Gerkmann, **S. Doclo**, “Speech Dereverberation with Convolutional Transfer Function Approximation Using MAP and Variational Deconvolution Approaches,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 51-55.
138. I. Kodrasi, **S. Doclo**, “Joint Dereverberation and Noise Reduction based on Acoustic Multichannel Equalization,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 140-144.
139. D. Marquardt, E. Hadad, S. Gannot, **S. Doclo**, “Optimal Binaural LCMV Beamformers for Combined Noise Reduction and Binaural Cue Preservation,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 289-293.
140. H. Schepker, S. Doclo, “Estimation of the Common Part of Acoustic Feedback Paths in Hearing Aids using iterative Quadratic Programming,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 46-50.
141. T. C. Lawin-Ore, S. Stenzel, J. Freudenberger, **S. Doclo**, “Alternative Formulation and Robustness Analysis of the Multichannel Wiener Filter for Spatially Distributed Microphones,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 208-212.
142. S. Goetze, A. Warzybok, I. Kodrasi, J. O. Jungmann, B. Cauchi, J. Rannies, E. Habets, A. Mertins, T. Gerkmann, **S. Doclo**, B. Kollmeier, “A Study on Speech Quality and Speech Intelligibility Measures for Quality Assessment of Single-Channel Dereverberation Algorithms,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 234-238.
143. A. Warzybok, I. Kodrasi, J. O. Jungmann, E. Habets, T. Gerkmann, A. Mertins, **S. Doclo**, B. Kollmeier, S. Goetze, “Subjective Speech Quality and Speech Intelligibility Evaluation of Single-Channel Dereverberation Algorithms,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Juan les Pins, France, Sep. 2014, pp. 333-337.
144. A. Kuklasinski, **S. Doclo**, S. H. Jensen, J. Jensen, “Maximum Likelihood Based Multi-Channel Late Reverberation Reduction for Hearing Aids using an Isotropic Reverberation Model,” in *Proc. European Signal Processing Conference*, Lisbon, Portugal, Sep. 2014, pp. 61-65.
145. A. Jukić, T. van Waterschoot, T. Gerkmann, **S. Doclo**, “Speech dereverberation with multi-channel linear prediction and sparse priors for the desired signal,” in *Proc. Joint Workshop on Hands-Free Speech Communication and Microphone Arrays*, Nancy, France, May 2014, pp. 23-26.
146. N. Mohammadiha, **S. Doclo**, “Transient Noise Reduction Using Nonnegative Matrix Factorization,” in *Proc. Joint Workshop on Hands-Free Speech Communication and Microphone Arrays*, Nancy, France, May 2014, pp. 27-31.
147. B. Cauchi, I. Kodrasi, R. Rehr, S. Gerlach, A. Jukić, T. Gerkmann, **S. Doclo**, S. Goetze, “Joint dereverberation and noise reduction using beamforming and a single-channel speech enhancement scheme,” in *Proc. REVERB Challenge Workshop*, Florence, Italy, May 2014.
148. F. Xiong, N. Moritz, R. Rehr, J. Anemüller, B. T. Meyer, T. Gerkmann, **S. Doclo**, S. Goetze, “Robust ASR in reverberant environments using temporal cepstrum smoothing for speech enhancement and an amplitude modulation filterbank for feature extraction,” in *Proc. REVERB Challenge Workshop*, Florence, Italy, May 2014.
149. I. Kodrasi, T. Gerkmann, **S. Doclo**, “Frequency-Domain Single-Channel Inverse Filtering for Speech Dereverberation: Theory and Practice,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Florence, Italy, May 2014, pp. 5214-5218.
150. A. Jukić, **S. Doclo**, “Speech dereverberation using weighted prediction error with Laplacian model of the desired signal,” in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Florence, Italy, May 2014, pp. 5209-5213.

151. D. Marquardt, V. Hohmann, **S. Doclo**, "Perceptually motivated coherence preservation in multi-channel Wiener filtering based noise reduction for binaural hearing aids," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Florence, Italy, May 2014, pp. 3688-3692.
152. H. Schepker, S. Doclo, "Modeling the common part of feedback paths in hearing aids using a pole-zero model," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Florence, Italy, May 2014, pp. 3693-3697.
153. E. Rasumow, M. Blau, M. Hansen, S. van de Par, **S. Doclo**, V. Mellert, D. Püschel, "The impact of the white noise gain (WNG) of a virtual artificial head on the appraisal of binaural sound reproduction," in *Proc. of the EAA Joint Symposium on Auralization and Ambisonics*, Berlin, Germany, Apr. 2014, pp. 174-180.
154. E. Rasumow, M. Blau, **S. Doclo**, M. Hansen, S. Van De Par, D. Püschel und V. Mellert, "Individualized binaural reproduction using a virtual artificial head," in *Proc. German Annual Conference on Acoustics (DAGA)*, Oldenburg, Germany, Mar. 2014, pp. 26-27.
155. T. C. Lawin-Ore, **S. Doclo**, "Average Output SNR of the Multichannel Wiener Filter using Statistical Room Acoustics," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2013.
156. S. Stenzel, T. C. Lawin-Ore, J. Freudenberger, **S. Doclo**, "A Multichannel Wiener Filter with Partial Equalization for Distributed Microphones," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2013.
157. D. Dalga, **S. Doclo**, "Influence of secondary path estimation errors on the performance of ANC-motivated noise reduction algorithms for hearing aids," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2013.
158. J. Schröder, N. Moritz, M. R. Schädler, B. Cauchi, K. Adiloglu, J. Anemüller, **S. Doclo**, B. Kollmeier, S. Goetze, "On the use of spectro-temporal features for the IEEE AASP Challenge 'Detection and classification of acoustic scenes and events,'" in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2013.
159. I. Kodrasi, **S. Doclo**, "Regularized Subspace-Based Acoustic Multichannel Equalization for Speech Dereverberation," in *Proc. European Signal Processing Conference (EUSIPCO)*, Marrakech, Morocco, Sep. 2013.
160. H. Schepker, J. Rannies, **S. Doclo**, "Improving speech intelligibility in noise by SII-dependent preprocessing using frequency dependent amplification and dynamic range compression," in *Proc. of Interspeech*, Lyon, France, Aug. 2013, pp. 3577-3581.
161. E. Rasumow, M. Blau, **S. Doclo**, M. Hansen, S. van de Par, D. Püschel, V. Mellert, "Least squares versus non-linear cost functions for a virtual artificial head," in *Proc. International Congress on Acoustics*, Montreal, Canada, Jun. 2013.
162. N. Moritz, M. R. Schädler, K. Adiloglu, B. T. Meyer, T. Jürgens, T. Gerkmann, B. Kollmeier, **S. Doclo**, S. Goetze, "Noise robust distant automatic speech recognition utilizing NMF based source separation and auditory feature extraction," in *Proc. 2nd International Workshop on Machine Listening in Multisource Environments*, Vancouver, Canada, Jun. 2013.
163. I. Kodrasi, S. Goetze, **S. Doclo**, "A Perceptually Constrained Channel Shortening Technique for Speech Dereverberation," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Vancouver, Canada, May 2013, pp. 151-155.
164. D. Marquardt, V. Hohmann, **S. Doclo**, "Coherence Preservation in Multi-channel Wiener Filtering Based Noise Reduction for Binaural Hearing Aids," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Vancouver, Canada, May. 2013, pp. 8648-8652.
165. D. Dalga, **S. Doclo**, "Effect of Secondary Path Amplitude Estimation Errors on the Performance of ANC-Motivated Algorithms for Open-Fitting Hearing Aids," in *Proc. Annual Conference on Acoustics (AIA-DAGA)*, Merano, Italy, Mar. 2013, pp. 1435-1438.
166. H. Schepker, J. Rannies, **S. Doclo**, "Improving speech intelligibility in background noise by SII-dependent amplification and compression," in *Proc. Annual Conference on Acoustics (AIA-DAGA)*, Merano, Italy, Mar. 2013, pp. 2140-2143.

167. D. Marquardt, V. Hohmann, **S. Doclo**, “Combined Noise Reduction and Coherence Reshaping for Binaural Hearing Aids,” in *Proc. Annual Conference on Acoustics (AIA-DAGA)*, Merano, Italy, Mar. 2013, pp. 875-878.
168. E. Rasumow, M. Blau, S. Van De Par, M. Hansen, **S. Doclo**, D. Püschel, V. Mellert, “Subjective importance of individual HRTF phase,” in *Proc. Annual Conference on Acoustics (AIA-DAGA)*, Merano, Italy, Mar. 2013, pp. 604-607.
169. T. Sankowsky-Rothe, D. Dalga, **S. Doclo** and M. Blau, “Comparison of transfer functions in the ear canal for open fitting hearing aids,” in *Proc. Annual Conference on Acoustics (AIA-DAGA)*, Merano, Italy, Mar. 2013, pp. 873-874.
170. I. Kodrasi, S. Goetze, **S. Doclo**, “Non-Intrusive Regularization for Least-Squares Multichannel Equalization Techniques for Speech Dereverberation,” in *Proc. IEEE Convention of Electrical and Electronics Engineers in Israel*, Eilat, Israel, Nov. 2012.
171. T. C. Lawin-Ore, **S. Doclo**, “Reference microphone selection for MWF-based noise reduction using distributed microphone arrays,” in *Proc. ITG Conference on Speech Communication*, Braunschweig, Germany, Sep. 2012, pp. 31-34.
172. S. Gerlach, S. Goetze, **S. Doclo**, “2D Audio-Visual Localization in Home Environments using a Particle Filter,” in *Proc. ITG Conference on Speech Communication*, Braunschweig, Germany, Sep. 2012, pp. 75-78.
173. L. Wang, T. Gerkmann, **S. Doclo**, “Noise PSD estimation using blind source separation in a diffuse noise field,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012, pp. 73-76.
174. D. Dalga, **S. Doclo**, “Theoretical Performance Analysis of ANC-Motivated Noise Reduction Algorithms for Open-Fitting Hearing Aids,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012, pp. 77-80.
175. E. Hadad, S. Gannot, **S. Doclo**, “Binaural linearly constrained minimum variance beamformer for hearing aid applications,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012, pp. 117-120.
176. T. C. Lawin-Ore, **S. Doclo**, “Using Statistical Room Acoustics for Computing the Spatially Averaged Performance of the Multichannel Wiener Filter Based Noise Reduction,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012, pp. 145-148.
177. I. Kodrasi, S. Goetze, **S. Doclo**, “Increasing the Robustness of Acoustic Multichannel Equalization by Means of Regularization,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012, pp. 161-164.
178. M. Ruhland, S. Goetze, M. Brandt, **S. Doclo**, J. Bitzer, “A new approach for reduction of supergaussian noise using autoregressive interpolation and time-frequency masking,” in *Proc. International Workshop on Acoustic Signal Enhancement (IWAENC)*, Aachen, Germany, Sep. 2012, pp. 217-220.
179. D. Marquardt, L. Wang, V. Hohmann, **S. Doclo**, “Improved noise estimation for the binaural MWF with instantaneous ITF preservation,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Bucharest, Romania, Aug. 2012, pp. 300-304.
180. I. Kodrasi, **S. Doclo**, “The Effect of Inverse Filter Length on the Robustness of Acoustic Multichannel Equalization,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Bucharest, Romania, Aug. 2012, pp. 2442-2446.
181. T. C. Lawin-Ore, **S. Doclo**, “Using Statistical Room Acoustics for Analysing the Output SNR of the MWF in Acoustic Sensor Networks,” in *Proc. European Signal Processing Conference (EUSIPCO)*, Bucharest, Romania, Aug. 2012, pp. 1259-1263.
182. B. Cauchi, S. Goetze, **S. Doclo**, “Reduction of Non-stationary Noise for a Robotic Living Assistant using Sparse Non-negative Matrix Factorization,” in *Proc. Speech and Multimodal Interaction in Assistive Environments*, Jeju, Republic of Korea, Jul. 2012, pp. 28-33.

183. E. Rasumow, M. Blau, M. Hansen, **S. Doclo**, S. Van De Par, D. Püschel, V. Mellert, "Smoothing head-related transfer functions for a virtual artificial head," in *Proc. Acoustics 2012*, Nantes, France, Apr. 2012, pp. 1019-1024.
184. I. Kodrasi, **S. Doclo**, "Robust Partial Multichannel Equalization Techniques for Speech Dereverberation," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Kyoto, Japan, Mar. 2012, pp. 537-540.
185. D. Marquardt, V. Hohmann, **S. Doclo**, "Binaural cue preservation for hearing aids using Multichannel Wiener Filter with instantaneous ITF preservation," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing*, Kyoto, Japan, Mar. 2012, pp. 21-24.
186. D. Dalga, **S. Doclo**, "Combined Feedforward-Feedback Noise Reduction Schemes for Open-Fitting Hearing Aids," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2011, pp. 185-188.
187. E. Rasumow, M. Blau, **S. Doclo**, S. van de Par, D. Püschel, V. Mellert, M. Hansen, "Robustness of virtual artificial head topologies with respect to positioning errors of array microphones," in *Proc. Forum Acusticum*, Aalborg, Denmark, June 2011, pp. 2251-2256.
188. A. Warzybok, J. Rannies, **S. Doclo**, B. Kollmeier, "Influence of early reflections on speech intelligibility under different noise conditions," in *Proc. Forum Acusticum*, Aalborg, Denmark, June 2011, pp. 1149-1154.
189. T. C. Lawin-Ore, **S. Doclo**, "Analysis of Rate Constraints for MWF-Based Noise Reduction in Acoustic Sensor Networks," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Prague, Czech Republic, May 2011, pp. 269-272.
190. I. Kodrasi, T. Rohdenburg, **S. Doclo**, "Microphone Position Optimization for Planar Superdirective Beamforming," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Prague, Czech Republic, May 2011, pp. 109-112.
191. D. Dalga, **S. Doclo**, "Integrated Active Noise Control and Noise Reduction Schemes in Open-Fitting Hearing Aids," in *Proc. German Annual Conference on Acoustics (DAGA)*, Düsseldorf, Germany, Mar. 2011, pp. 367-368.
192. D. Marquardt, V. Hohmann, **S. Doclo**, "Performance comparison of binaural beamforming and MWF-based noise reduction algorithms for hearing aids," in *Proc. German Annual Conference on Acoustics (DAGA)*, Düsseldorf, Germany, Mar. 2011, pp. 639-640.
193. S. Gerlach, S. Goetze, J. Bitzer, **S. Doclo**, "Evaluation of joint position-pitch estimation algorithm for localising multiple speakers in adverse acoustical environments," in *Proc. German Annual Conference on Acoustics (DAGA)*, Düsseldorf, Germany, Mar. 2011, pp. 633-634.
194. **S. Doclo**, T. C. Lawin-Ore, T. Rohdenburg, "Rate-constrained binaural MWF-based noise reduction algorithms", in *Proc. ITG Conference on Speech Communication*, Bochum, Germany, Oct. 2010.
195. T. Van den Bogaert, **S. Doclo**, J. Wouters, and M. Moonen, "Preserving binaural hearing of hearing impaired subjects with binaural noise reduction systems for hearing aids," in *Proc. NAG-DAGA International Conference on Acoustics*, Rotterdam, The Netherlands, Mar. 2009, pp. 176-179.
196. B. Cornelis, **S. Doclo**, T. Van den Bogaert, M. Moonen, J. Wouters, "Analysis of localization cue preservation by Multichannel Wiener Filtering based binaural noise reduction in hearing aids," in *Proc. of European Signal Processing Conference (EUSIPCO)*, Lausanne, Switzerland, Aug. 2008.
197. Kim Ngo, **S. Doclo**, A. Spriet, M. Moonen, J. Wouters, S. H. Jensen, "An integrated approach for noise reduction and dynamic range compression in hearing aids," in *Proc. of European Signal Processing Conference (EUSIPCO)*, Lausanne, Switzerland, Aug. 2008.
198. **S. Doclo**, T. Van den Bogaert, J. Wouters, M. Moonen, "Comparison of reduced-bandwidth MWF-based noise reduction algorithms for binaural hearing aids," in *Proc. of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2007, pp. 223-226.
199. T. Van den Bogaert, **S. Doclo**, J. Wouters, M. Moonen, "Binaural cue preservation for hearing aids using an interaural transfer function multichannel Wiener filter," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Honolulu HI, USA, Apr. 2007, pp. 565-568.



200. **S. Doclo**, T. J. Klasen, T. Van den Bogaert, J. Wouters, M. Moonen, "Theoretical analysis of binaural cue preservation using multi-channel Wiener filtering and interaural transfer functions," in *Proc. International Workshop on Acoustic Echo and Noise Control (IWAENC)*, Paris, France, Sep. 2006.
201. A. Spriet, **S. Doclo**, M. Moonen, J. Wouters, "A unification of adaptive multi-microphone noise reduction systems," in *Proc. International Workshop on Acoustic Echo and Noise Control (IWAENC)*, Paris, France, Sep. 2006.
202. **S. Doclo**, M. Moonen, "Superdirective Beamforming Robust Against Microphone Mismatch," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Toulouse, France, May 2006, pp. V 41-44.
203. T. J. Klasen, **S. Doclo**, T. van den Bogaert, M. Moonen, J. Wouters, "Binaural multi-channel Wiener filtering for hearing aids: preserving interaural time and level differences," in *Proc. IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP)*, Toulouse, France, May 2006, pp. V 145-148.
204. **S. Doclo**, R. Dong, T. J. Klasen, J. Wouters, S. Haykin, M. Moonen, "Extension of the multi-channel Wiener filter with ITD cues for noise reduction in binaural hearing aids," in *Proc. of IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, Oct. 2005, pp. 70-73.
205. **S. Doclo**, R. Dong, T. J. Klasen, J. Wouters, S. Haykin, M. Moonen, "Extension of the multi-channel Wiener filter with localisation cues for noise reduction in binaural hearing aids," in *Proc. of International Workshop on Acoustic Echo and Noise Control (IWAENC)*, Eindhoven, The Netherlands, Sep. 2005, pp. 221-224.
206. **S. Doclo**, A. Spriet, M. Moonen, "Efficient frequency-domain implementation of speech distortion weighted multi-channel Wiener filtering for noise reduction," in *Proc. of the European Signal Processing Conference (EUSIPCO)*, Vienna, Austria, Sep. 2004, pp. 2007-2010.
207. **S. Doclo**, A. Spriet, M. Moonen, "Design of a robust multi-microphone noise reduction algorithm for hearing instruments", in *Proc. Int. Symposium on Mathematical Theory of Networks and Systems (MTNS)*, Leuven, Belgium, July 2004.
208. **S. Doclo**, A. Spriet, M. Moonen, "Efficient frequency-domain implementation of speech distortion weighted multi-channel Wiener filtering for noise reduction," in *Proc. of the IEEE Benelux Signal Processing Symposium (SPS-2004)*, Hilvarenbeek, The Netherlands, pp. 195-198, Apr. 2004.
209. **S. Doclo**, M. Moonen, "Design of broadband beamformers robust against microphone position errors," in *Proc. Int. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Kyoto, Japan, pp. 267-270, Sep. 2003.
210. **S. Doclo**, M. Moonen, "Design of broadband speech beamformers robust against errors in the microphone array characteristics," in *Proc. IEEE Int. Conf. Acoustics, Speech, and Signal Processing (ICASSP)*, Hong Kong SAR, China, pp. V 473-476, Apr. 2003.
211. **S. Doclo**, M. Moonen, "Design of far-field broadband beamformers using eigenfilters," in *Proc. European Signal Processing Conf. (EUSIPCO)*, Toulouse, France, pp. III 237-240, Sep. 2002.
212. **S. Doclo**, M. Moonen, "Comparison of least-squares and eigenfilter techniques for broadband beamforming," in *Proc. of the IEEE Benelux Signal Processing Symposium (SPS-2002)*, Leuven, Belgium, pp. 73-76, Mar. 2002.
213. **S. Doclo**, M. Moonen, "Robust time-delay estimation in highly adverse acoustic environments," in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, pp. 59-62, Oct. 2001.
214. **S. Doclo**, M. Moonen, "Combined frequency-domain dereverberation and noise reduction technique for multi-microphone speech enhancement," in *Proc. Int. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Darmstadt, Germany, pp. 31-34, Sep. 2001.
215. **S. Doclo**, E. De Clippel, M. Moonen, "Multi-microphone noise reduction using GSVD-based optimal filtering with ANC postprocessing stage," in *Proc. of DSP2000 Workshop*, Hunt TX, USA, pp. 383-388, Oct. 2000.

216. **S. Doclo**, E. De Clippel, M. Moonen, “Combined Acoustic Echo and Noise Reduction using GSVD-based Optimal Filtering,” in *Proc. IEEE Int. Conf. Acoustics, Speech, and Signal Processing (ICASSP)*, Istanbul, Turkey, pp. II 1061-1064, June 2000.
217. **S. Doclo**, M. Moonen, “Noise Reduction in Multi-Microphone Speech Signals using Recursive and Approximate GSVD-based Optimal Filtering,” in *Proc. of the IEEE Benelux Signal Processing Symposium (SPS-2000)*, Hilvarenbeek, The Netherlands, Mar. 2000.
218. **S. Doclo**, M. Moonen, “SVD-based optimal filtering with applications to noise reduction in speech signals,” in *Proc. IEEE Workshop on Applications of Signal Processing to Audio and Acoustics (WASPAA)*, New Paltz NY, USA, pp. 143-146, Oct. 1999.
219. **S. Doclo**, M. Moonen, “Robustness of SVD-based Optimal Filtering for Noise Reduction in Multi-Microphone Speech Signals,” in *Proc. Int. Workshop on Acoustic Echo and Noise Control (IWAENC)*, Pocono Manor PA, USA, pp. 80-83, Sep. 1999.
220. **S. Doclo**, I. Dologlou, M. Moonen, “A novel iterative signal enhancement algorithm for noise reduction in speech,” in *Proc. Int. Conf. on Spoken Language Processing (ICSLP)*, Sydney, Australia, pp. 1435-1438, Dec. 1998.

### Conference abstracts

1. M. Ohlenbusch, C. Rollwage, **S. Doclo**, J. Rannies-Hochmuth, “Deep learning-based own voice pickup for enabling speech communication in hearing protection devices”, *National Hearing Conservation Association 47th Annual Conference*, Jacksonville FL, USA, Feb. 2023.
2. M. Tammen, **S. Doclo**, “Deep Learning-Based Multi-Frame Filtering for Binaural Speech Enhancement”, *International Congress on Acoustics (ICA)*, Gyeongju, South Korea, Oct. 2022.
3. H. Gode, **S. Doclo**, “Adaptive Convolutional Beamforming for Joint Dereverberation, Interferer and Noise Reduction”, *International Congress on Acoustics (ICA)*, Gyeongju, South Korea, Oct. 2022.
4. M. Tammen, **S. Doclo**, “Supervised Learning-Based Multi-Frame Filtering for Binaural Speech Enhancement”, *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2022.
5. P. Rivera Benois, R. Roden, M. Blau, **S. Doclo**, “Robust Optimization Methods for Fixed Virtual Sensing Feedback Active Noise Cancelling Controllers Targeting In-Ear Headphones”, *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2022.
6. W. Middelberg, **S. Doclo**, “Incorporation of External Microphones in Hearing Aid Processing for Robust Noise and Interferer Reduction”, *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2022.
7. D. Fejgin, **S. Doclo**, “Exploiting an external microphone for binaural direction of arrival estimation for multiple speakers”, *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2022.
8. W. Middelberg, **S. Doclo**, “MPDR-Based Extended GSC Structure for Joint Noise and Interferer Reduction in Hearing Devices,” *German Annual Conference on Acoustics (DAGA)*, Stuttgart, Germany, Mar. 2022.
9. J. Rannies, R. Sinha, C. Rollwage, A.-C. Scherer, **S. Doclo**, “Online-capable single-channel voice filter improves speech perception in speech-on-speech masking conditions,” *German Annual Conference on Acoustics (DAGA)*, Stuttgart, Germany, Mar. 2022.
10. R. Attili Chiea, **S. Doclo**, “Single-channel speech enhancement using temporal convolutional networks: application on cochlear implants,” *DGBMT Annual Conference on Biomedical Engineering*, Hannover, Germany, Oct. 2021.
11. P. Rivera Benois, R. Roden, M. Blau, **S. Doclo**, “Sound Pressure Minimization at the Ear Drum Using an In-Ear Earpiece with a Feedback ANC Controller Based on the Virtual Microphone Arrangement Approach,” *German Annual Conference on Acoustics (DAGA)*, Vienna, Austria, Aug. 2021.
12. **S. Doclo**, “Cognitive-Driven Binaural Beamforming for Hearing Devices Using EEG-Based Auditory Attention Decoding,” *Conference on Implantable Auditory Prostheses (CIAP)*, Lake Tahoe, USA, Jul. 2021.

13. N. Gößling, **S. Doclo**, “Binaural MVDR Beamforming Incorporating External Microphones in Complex Acoustic Scenarios,” *Erlanger Kolloquium for Audiological Research and Development*, Erlangen, Germany, Feb. 2020.
14. F. Denk, H. Schepker, **S. Doclo**, B. Kollmeier, “Acoustic transparency of commercial hearables and research hearing devices,” *Erlanger Kolloquium for Audiological Research and Development*, Erlangen, Germany, Feb. 2020.
15. A. Aroudi, H. Kayser, **S. Doclo**, “Binary-masking-based auditory attention decoding without access to clean speech signals,” *Auditory EEG Signal Processing (AESoP) symposium*, Leuven, Belgium, Sep. 2019.
16. H. Schepker, F. Denk, R. Roden, M. Blau, B. Kollmeier, **S. Doclo**, “Acoustically transparent sound presentation in hearing devices: algorithms, devices, and models,” *International Congress on Acoustics (ICA)*, Aachen, Germany, Sep. 2019.
17. N. Gößling, **S. Doclo**, “RTF-Steered Binaural MVDR Beamforming Incorporating an External Microphone for Dynamic Acoustic Scenarios,” *International Congress on Acoustics (ICA)*, Aachen, Germany, Sep. 2019.
18. M. Tammen, I. Kodrasi, **S. Doclo**, “Alternating Least Squares-Based Joint Estimation of RETFs and PSDs for Multi-Channel Speech Enhancement,” *International Congress on Acoustics (ICA)*, Aachen, Germany, Sep. 2019.
19. A. Aroudi, **S. Doclo**, “Cognitive-Driven Binaural Speech Enhancement System for Hearing Aid Applications,” *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Berlin, Germany, Jul. 2019.
20. W. Middelberg, N. Gößling, **S. Doclo**, “Real-Time Evaluation of an RTF-Steered Binaural MVDR Beamformer Incorporating an External Microphone,” *German Annual Conference on Acoustics (DAGA)*, Rostock, Germany, Mar. 2019.
21. N. Gößling, **S. Doclo**, “Comparison of binaural MVDR-based beamforming algorithms using an external microphone,” *11th Workshop on Speech in Noise (SpiN)*, Gent, Belgium, Jan. 2019.
22. J. Klug, N. Gößling, **S. Doclo**, “Subjective Evaluation of Signal-Dependent Partial Noise Estimation Algorithms for Binaural Hearing Aids,” *11th Workshop on Speech in Noise (SpiN)*, Gent, Belgium, Jan. 2019.
23. C. F. Hauth, N. Gößling, **S. Doclo**, T. Brand, “Performance Prediction of the Binaural MVDR Beamformer with Partial Noise Estimation using a Binaural Speech Intelligibility Model,” *11th Workshop on Speech in Noise (SpiN)*, Gent, Belgium, Jan. 2019.
24. M. Tammen, I. Kodrasi, **S. Doclo**, “Joint Estimation of RETFs and PSDs for a Moving Speaker Based on Alternating Least Squares,” *ICSEE International Conference on the Science of Electrical Engineering*, Eilat, Israel, Dec. 2018.
25. N. Gößling, **S. Doclo**, “RTF-Based Binaural MVDR Beamformer Exploiting an External Microphone for Dynamic Acoustic Scenarios,” *ICSEE International Conference on the Science of Electrical Engineering*, Eilat, Israel, Dec. 2018.
26. N. Gößling, **S. Doclo**, “Comparison of binaural MVDR-based beamforming algorithms using an external microphone,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2018.
27. J. Klug, D. Marquardt, **S. Doclo**, “Subjective Evaluation of Signal-Dependent Partial Noise Preservation Algorithms for Binaural Hearing Aids,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2018.
28. D. Marquardt, I. Merks, T. Zhang, **S. Doclo**, “Subjective evaluation of binaural noise reduction and cue preservation algorithms in a cocktail party scenario,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2018.
29. A. Aroudi, D. Marquardt, **S. Doclo**, “Cognitive-driven binaural speech enhancement system for hearing aid applications,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2018.

30. H. Schepker, **S. Doclo**, “Evaluation of acoustic feedback cancellation for a multi-microphone earpiece using a null-steering beamformer,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe, USA, Aug. 2018.
31. A. Aroudi, D. Marquardt, **S. Doclo**, “Cognitive-driven binaural speech enhancement system for hearing aid applications,” *Auditory EEG Signal Processing (AESoP) symposium*, Leuven, Belgium, May 2018.
32. A. Aroudi, **S. Doclo**, “Auditory Attention Decoding in Reverberant and Noisy Conditions,” *Workshop on Signal and Noise along the Auditory Pathway (SNAP)*, Lübeck, Germany, Dec. 2017.
33. J. Rennies-Hochmuth, H. Schepker, D. Hülsmeier, J. Drefs, **S. Doclo**, “Evaluating near-end listening enhancement in noise for normal-hearing and hearing-impaired listeners,” *Meeting of the Acoustical Society of America and Forum Acusticum*, Boston, USA, Jun. 2017.
34. H. Schepker, **S. Doclo**, “Acoustic feedback cancellation for a novel multi-microphone earpiece combining null-steering and adaptive filtering,” *Erlanger Kolloquium for Audiological Research and Development*, Erlangen, Germany, Feb. 2017.
35. D. Fischer, **S. Doclo**, “Multi-Frame MVDR Filtering for Single- and Multi-Microphone Speech Enhancement,” *Erlanger Kolloquium for Audiological Research and Development*, Erlangen, Germany, Feb. 2017.
36. J. Rennies-Hochmuth, H. Schepker, D. Hülsmeier, J. Drefs, **S. Doclo**, “Noise-adaptive near-end listening enhancement for normal-hearing and hearing-impaired listeners,” *9th Workshop on Speech in Noise: Intelligibility and Quality*, Oldenburg, Germany, Jan. 2017.
37. D. Marquardt, E. Hadad, W.-Q. Pu, **S. Doclo**, S. Gannot, Z.-Q. Luo, I. Merks, T. Zhang, “Performance comparison of two binaural speech enhancement algorithms for hearing aids,” *International Hearing Aid Conference (IHCON)*, Lake Tahoe, USA, Aug. 2016.
38. D. Marquardt, H. Kayser, **S. Doclo**, “Evaluation of MVDR-based Noise Reduction Algorithms for Binaural Hearing Aids in the Presence of DOA Estimation Errors,” *International Hearing Aid Conference (IHCON)*, Lake Tahoe, USA, Aug. 2016.
39. H. Schepker, **S. Doclo**, “Acoustic Feedback Cancellation for a Multi-Microphone Earpiece using a Null-Steering Beamformer,” *International Hearing Aid Conference (IHCON)*, Lake Tahoe, USA, Aug. 2016.
40. A. Aroudi, B. Mirkovic, M. De Vos, **S. Doclo**, “Influence of Noisy Reference Signals on Selective Attention Decoding,” *International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC)*, Milan, Italy, Aug. 2015.
41. **S. Doclo**, D. Marquardt, “Binaural Cue Preservation in Noise Reduction Algorithms for Binaural Hearing Aids”, *12th Congress of the European Federation of Audiology Societies (EFAS)*, Istanbul, Turkey, May 2015.
42. R. Baumgärtel, D. Marquardt, M. Krawczyk, H. Hu, C. Völker, S. Ernst, T. Herzke, G. Coleman, K. Adiloglu, K. Bomke, K. Plotz, R. Huber, T. Gerkmann, **S. Doclo**, B. Kollmeier, V. Hohmann, M. Dietz, “Instrumental and perceptual assessment of binaural speech enhancement algorithms for bilateral CI users”, *12th Congress of the European Federation of Audiology Societies (EFAS)*, Istanbul, Turkey, May 2015.
43. **S. Doclo**, “Noise reduction algorithms in hearing aids: state of the art and evaluation,” *18. Jahrestagung der Deutschen Gesellschaft für Audiologie (DGA)*, Bochum, Germany, Mar. 2015
44. N. Mohammadiha, **S. Doclo**, “Supervised Speech Enhancement”, *Annual Conference of the German Society for Biomedical Engineering*, Hannover, Germany, Oct. 2014.
45. J. Rennies, A. M. Kubiak, **S. Doclo**, “Personalization of audio playback using intuitive self-fitting interfaces”, *Annual Conference of the German Society for Biomedical Engineering*, Hannover, Germany, Oct. 2014.
46. D. Marquardt, V. Hohmann, **S. Doclo**, “Subjective Evaluation of Interaural Coherence Preservation in MWF-based Noise Reduction Algorithms for Binaural Hearing Aids”, *International Hearing Aid Conference (IHCON)*, Lake Tahoe, USA, Aug. 2014.
47. H. Schepker, **S. Doclo**, “Common Part Modeling of Acoustic Feedback Paths in open-fitting Hearing Aids”, *International Hearing Aid Conference (IHCON)*, Lake Tahoe, USA, Aug. 2014.

48. R. Baumgärtel, D. Marquardt, M. Krawczyk, H. Hu, T. Herzke, G. Coleman, K. Adiloglu, K. Bomke, K. Plotz, R. Huber, T. Gerkmann, **S. Doclo**, B. Kollmeier, V. Hohmann, M. Dietz, "Speech understanding in realistic noise environments using binaural signal pre-processing strategies in bilateral CI users", *International Conference on Cochlear Implants and Other Implantable Auditory Technologies*, Munich, June 2014.
49. D. Marquardt, V. Hohmann, **S. Doclo**, "Perceptually motivated preservation of the Interaural Coherence in noise reduction algorithms for binaural hearing aids", *German Annual Conference on Acoustics (DAGA)*, Oldenburg, Germany, Mar. 2014.
50. D. Dalga, **S. Doclo**, "ANC-Motivated Noise Reduction Algorithms for Open-Fitting Hearing Aids", *German Annual Conference on Acoustics (DAGA)*, Oldenburg, Germany, Mar. 2014.
51. H. Schepker, **S. Doclo**, "Comparison of common part modeling of acoustic feedback paths in hearing aids", *German Annual Conference on Acoustics (DAGA)*, Oldenburg, Germany, Mar. 2014.
52. D. Marquardt, V. Hohmann, **S. Doclo**, "Combined Noise Reduction and Interaural Coherence Reshaping for Binaural Hearing Aids", *40. Erlanger Kolloquium for Audiological Research and Development*, Erlangen, Germany, Feb. 2013.
53. D. Dalga, **S. Doclo**, "Active Noise Control-Motivated Noise Reduction Algorithms for Open-Fitting Hearing Aids", *40. Erlanger Kolloquium for Audiological Research and Development*, Erlangen, Germany, Feb. 2013.
54. H. Schepker, J. Rannies, **S. Doclo**, "Improving speech intelligibility in background noise by SII-dependent amplification and compression", *5th Workshop on Speech in Noise: Intelligibility and Quality*, Vitoria, Spain, Jan. 2013.
55. D. Marquardt, V. Hohmann, **S. Doclo**, "Coherence Preservation in MWF-based Noise Reduction Algorithms for Binaural Hearing Aids", *Digital Signal Processing in Audiology (AUDIS) Workshop*, Aachen, Germany, Sep. 2012.
56. T. Van den Bogaert, **S. Doclo**, J. Wouters, M. Moonen, "Improvements in speech perception and sound localization in hearing aids using binaural multichannel Wiener filtering," *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe CA, USA, Aug. 2008.
57. J. Wouters, **S. Doclo**, M. Moonen, T. Van den Bogaert, "Speech-in-noise enhancement and sound localization with improved binaural hearing instruments," *Acoustics'08*, Paris, France, Jul. 2008
58. J. Wouters, **S. Doclo**, M. Moonen, T. Van den Bogaert, "The use of both ears: noise reduction and localization with bilateral hearing aids," *8th European Federation of Audiology Societies Congress (EFAS)*, Heidelberg, Germany, June 2007.
59. J. Wouters, **S. Doclo**, K. Eneman, A. Leijon, M. Moonen, A. Spriet, T. Van den Bogaert, "Advanced signal processing for hearing instruments and cochlear implants," *International Conference on Audiology*, Innsbruck, Austria, Sep. 2006.
60. T.J. Klasen, **S. Doclo**, M. Moonen, T. Van den Bogaert, J. Wouters, "Perceptual and theoretical evaluation of the interaural Wiener filter (IWF) algorithm with respect to speech reception thresholds," *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe CA, USA, Aug. 2006.
61. T. Van den Bogaert, J. Wouters, T.J. Klasen, **S. Doclo**, M. Moonen, "Perceptual and theoretical evaluation of the interaural Wiener filter (IWF) algorithm with respect to localization cues," *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe CA, USA, Aug. 2006.
62. J. Patrick, L. Van Deun, A. Spriet, **S. Doclo**, K. Eftaxiadis, J. Laneau, J.-B. Maj, M. Moonen, B. Van Dijk, A. Van Wieringen, J. Wouters, "Better understanding of speech in noise with BEAM™, a two-microphone adaptive beamformer in the Nucleus Freedom™ system," *5th Asia Pacific Symposium on Cochlear Implants and Related Sciences*, Hong Kong, China, Nov. 2005.
63. J. Wouters, L. Van Deun, A. Spriet, **S. Doclo**, J. Laneau, M. Moonen, A. Van Wieringen, "Signal processing strategies for improved speech understanding in noisy listening conditions," *2005 Conference on Implantable Auditory Prostheses (CIAP)*, Pacific Grove CA, USA, Aug. 2005.
64. A. Spriet, L. Van Deun, **S. Doclo**, K. Eftaxiadis, J. Laneau, J.-B. Maj, M. Moonen, B. Van Dijk, A. van Wieringen, J. Wouters, "Evaluation of speech understanding in noise with a two-microphone adaptive

beamformer in the new Nucleus cochlear implant system,” *7th European Federation of Audiology Societies Congress (EFAS)*, Göteborg, Sweden, June 2005.

65. **S. Doclo**, A. Spriet, M. Moonen, J. Wouters, “Frequency-Domain Criterion for Speech Distortion Weighted Multichannel Wiener Filtering for Robust Noise Reduction,” *Joint Workshop on Hands-Free Speech Communication and Microphone Arrays (HSCMA)*, Piscataway NJ, USA, Mar. 2005.
66. J. Wouters, A. Spriet, L. Van Deun, **S. Doclo**, K. Eftaxiadis, J. Laneau, M. Moonen, B. Van Dijk, A. van Wieringen, “Enhanced speech understanding with a two-microphone adaptive beamformer in the new Nucleus cochlear implant system,” *10th Symposium on Cochlear Implants in Children*, Dallas TX, USA, Mar. 2005.
67. L. Van Deun, A. Spriet, **S. Doclo**, K. Eftaxiadis, J. Laneau, J.-B. Maj, M. Moonen, B. Van Dijk, A. van Wieringen, J. Wouters, “Benefit of a two-microphone adaptive beamformer in the new Nucleus cochlear implant system,” *International Collegium for Rehabilitative Audiology (ICRA)*, Gainesville FL, USA, Mar. 2005.
68. **S. Doclo**, A. Spriet, J. Wouters, M. Moonen, “Design, implementation and evaluation of a robust multi-microphone noise reduction algorithm for hearing instruments,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe CA, USA, Aug. 2004.
69. J. Wouters, **S. Doclo**, T. Klasen, J.-B. Maj, M. Moonen, L. Royackers, A. Spriet, T. Van den Bogaert, “Noise reduction approaches for improved speech perception,” *International Hearing Aid Research Conference (IHCON)*, Lake Tahoe CA, USA, Aug. 2004.
70. **S. Doclo**, A. Spriet, J.-B. Maj, M. Moonen, J. Wouters, B. Van Dijk, J. Janssen, “Design and low-cost implementation of a robust multichannel noise reduction scheme for cochlear implants,” *DSP Valley Annual Research and Technology Symposium (DARTS)*, Leuven, Belgium, Oct. 2003.
71. **S. Doclo**, M. Moonen, “Design of robust broadband beamformers for speech applications,” *International Workshop on Microphone Array Systems*, Erlangen, Germany, May 2003.
72. **S. Doclo**, M. Moonen, “Multi-microphone noise reduction using GSVD-based optimal filtering,” *International Workshop on Microphone Array Systems*, Boston MA, USA, Oct. 2000.

## PATENTS

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**S. Doclo**, A. Spriet, M. Moonen, J. Wouters, “Method and device for noise reduction” (US7657038; EP1652404; JP4989967)

S. Haykin, R. Dong, **S. Doclo**, M. Moonen, “Method and device for binaural signal enhancement” (US8139787)

**S. Doclo**, T.J. Klasen, M. Moonen, T. Van den Bogaert, J. Wouters, R.P. Derleth, S. Korl, “Hearing system and method implementing binaural noise reduction preserving interaural transfer functions” (US2010002886; EP2016799)

T. Gautama, **S. Doclo**, “Hybrid active noise reduction device for reducing environmental noise, method for determining an operational parameter of a hybrid active noise reduction device, and program element” (EP2259250)

**S. Doclo**, “Active noise reduction method using perceptual masking” (US9437182; EP2284831; CN101989423)

H. Schepker, J. Rannies, **S. Doclo**, J. E. Appell, “Improving speech intelligibility in background noise by SII-dependent amplification and compression” (US10319394; EP2943954; JP6162254)

D. Püschel, M. Blau, S. Köhler, E. Rasumow, S. van de Par, M. Hansen, **S. Doclo**, V. Mellert, “Device and method for the determination of head-related transfer functions” (DE102014204368)

## INVITED LECTURES

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1. “Model-Based and Learning-Based Approaches for Speech Enhancement and Source Localisation”, European Signal Processing Conference, Helsinki, Finland, Sep. 2023. **(keynote)**

2. "DNN-based speech enhancement for hearing devices", Hearing Aid Developer Forum, Oldenburg, Germany, June 2023.
3. "Acoustically Transparent Earpiece: Equalization, Feedback cancellation, Active noise control and Own voice pickup", Danish Sound Cluster, online, May 2023.
4. "Model-Based and Learning-Based Approaches for Speech Enhancement and Source Localisation", Aalborg University, Aalborg, Denmark, Mar. 2023.
5. "Model-Based and Learning-Based Approaches for Speech Enhancement and Source Localisation", Technion, Haifa, Israel, Feb. 2023.
6. "Model-Based and Learning-Based Approaches for Speech Enhancement and Source Localisation", Bar-Ilan University, Tel Aviv, Israel, Feb. 2023.
7. "Model-Based and Learning-Based Approaches for Speech Enhancement and Source Localisation", NTT Communication Science Laboratories, Kyoto, Japan, Dec. 2022.
8. "Model-Based and Learning-Based Approaches for Speech Enhancement", LINE Corporation, Tokyo, Japan, Dec. 2022.
9. "Binaural noise reduction, source localisation and acoustic transparency for hearing devices", Rion, Tokyo, Japan, Dec. 2022.
10. "Model-Based and Learning-Based Approaches for Speech Enhancement", Tokyo Metropolitan University, Tokyo, Japan, Dec. 2022.
11. "Model-Based and Learning-Based Approaches for Speech Enhancement", Google, Tokyo, Japan, Dec. 2022.
12. "Model-Based and Learning-Based Approaches for Speech Enhancement", Amazon Web Services, Palo Alto, USA, Aug. 2022.
13. "Cognitive-Driven Binaural Beamforming for Hearing Devices Using EEG-Based Auditory Attention Decoding," Conference on Implantable Auditory Prostheses (CIAP), on-line, Jul. 2021.
14. "Acoustic Transparency in Hearables - Technical and Perceptual Sound Quality Evaluation", Hearing4all Symposium, on-line, Nov. 2020.
15. "Blind multi-microphone noise reduction and dereverberation algorithms for speech communication applications", Informatics Colloquium, University of Hamburg, Germany, Nov. 2019.
16. "Blind multi-microphone noise reduction and dereverberation algorithms for speech communication applications", Microsoft Research, Redmond, USA, Oct. 2019.
17. "Blind multi-microphone noise reduction and dereverberation algorithms for speech communication applications", SANE (Speech and Audio in the Northeast) Workshop, New York, USA, Oct. 2019. **(keynote)**
18. "Acoustically transparent sound presentation in hearing devices: algorithms, devices and models", International Congress on Acoustics, Aachen, Germany, Sep. 2019.
19. "Joint Estimation of RETFs and PSDs for Multi-Channel Speech Enhancement", International Congress on Acoustics, Aachen, Germany, Sep. 2019.
20. "RTF-Steered Binaural MVDR Beamforming Incorporating an External Microphone for Dynamic Acoustic Scenarios", International Congress on Acoustics, Aachen, Germany, Sep. 2019.
21. "Exploiting external microphones for speech enhancement algorithms in hearing aids", Hearing Aid Developers Forum, Oldenburg, Germany, June 2019.
22. "Binaural speech enhancement and cue preservation algorithms," International Symposium on auditory scene analysis in music and speech, Delmenhorst, Germany, Mar. 2019.
23. "Binaural speech enhancement and cue preservation algorithms," ELOBES Workshop - Optimising Binaural Hearing for Environment and Listener, Gent, Belgium, Jan. 2019. **(keynote)**
24. "Cognitive-Driven Binaural Speech Enhancement System for Hearing Aid Applications", International Hearing Aid Research Conference, Lake Tahoe, USA, Aug. 2018.
25. "Algorithmen zur Verbesserung der Sprachqualität in Hörgeräten", Oticon Symposium, Hamburg, Germany, Nov. 2017.

26. “Acoustically Transparent Hearing Device: Towards Integration of Individualized Sound Equalization, Electro-Acoustic Modeling and Feedback Cancellation”, International Workshop on Challenges in Hearing Assistive Technology, Stockholm, Sweden, Aug. 2017.
27. “A Simulation Study on Binaural Dereverberation and Noise Reduction based on Diffuse Power Spectral Density Estimators,” International Workshop on Challenges in Hearing Assistive Technology, Stockholm, Sweden, Aug. 2017.
28. “Highlights from Hearing4all for patients with hearing aids and the subclinical population”, European Federation of Audiology Societies Conference, Interlaken, Switzerland, June 2017.
29. “Binaural beamforming and acoustic sensor networks”, DEGA Electroacoustics Technical Committee Meeting, Ilmenau, Germany, Feb. 2017.
30. “Recent advances in noise reduction and dereverberation algorithms for binaural hearing aids”, Erlanger Kolloquium for Audiological Research and Development, Erlangen, Germany, Feb. 2017. **(keynote)**
31. “Incorporating sparsity into multi-microphone speech dereverberation techniques,” ICSEE Symposium on Speech and Audio Processing, Eilat, Israel, Nov. 2016.
32. “Overview of acoustic signal processing research”, NXP Semiconductors, Leuven, Belgium, Mar. 2016.
33. “Design and evaluation of binaural speech enhancement and cue preservation algorithms”, KU Leuven (Experimental Oto-rhino-laryngology, Dept. Electrical Engineering), Leuven, Belgium, Mar. 2016.
34. “Binaural Cue Preservation in Noise Reduction Algorithms for Binaural Hearing Aids”, Binaural Hearing Workshop, Delmenhorst, Germany, June 2015.
35. “Binaural Cue Preservation in Noise Reduction Algorithms for Binaural Hearing Aids”, Hearing Aid Developers Forum, Oldenburg, Germany, June 2015.
36. “Binaural Cue Preservation in Noise Reduction Algorithms for Binaural Hearing Aids”, 12<sup>th</sup> European Federation of Audiology Societies Congress, Istanbul, Turkey, June 2015.
37. “Binaural noise reduction for hearing aids”, Starkey Hearing Technologies and IEEE-TC SP/COM Chapter Joint Meeting, Minneapolis, USA, Oct. 2013.
38. “Spatial cue preservation for binaural noise reduction”, Hearing Aid Developers Forum, Oldenburg, Germany, June 2013.
39. “Non-Intrusive Regularization for Least-Squares Multichannel Equalization Techniques for Speech Dereverberation,” IEEE Convention of Electrical and Electronics Engineers in Israel, Eilat, Israel, Nov. 2012.
40. “Signal processing algorithms for wirelessly connected hearing devices”, Nordic Audiology College, Stockholm, Sweden, Sep. 2012.
41. “Statistical Room Acoustics in Acoustic Sensor Networks”, NTT Communication Science Labs, Kyoto, Japan, Apr. 2012.
42. “Digital Signal Processing in Hearing Aids”, DGMP Winter school on Audiology and Signal Processing, Pichl, Austria, Feb 2012.
43. “Signal processing for open-fitting hearing aids“, Kolloquium Kommunikationstechnik, IND - RWTH Aachen, Germany, July 2011.
44. “Hearing devices using wireless acoustic sensor networks”, Hearing Aid Developers Forum, Oldenburg, Germany, June 2011. **(keynote)**
45. “Distributed microphone array signal processing with rate constraints”, ITG Conference Speech Communication, Bochum, Germany, Oct. 2010.
46. “Distributed microphone array signal processing for hearing aids”, International Workshop on Acoustic Echo and Noise Control (IWAENC), Tel Aviv, Israel, Sep 2010. **(keynote)**
47. “Distributed microphone array signal processing in hearing aids”, tubs.CITY Symposium – Workshop on Spoken Language Processing, Braunschweig, Germany, June 2010.
48. “Speech signal processing in noisy and reverberant acoustic environments”, School of Electrical and Electronic Engineering, Nanyang Technological University, Singapore, Sep 2007.
49. “Noise reduction and binaural cue preservation of multi-microphone algorithms”, International Forum for hearing instruments developers, Oldenburg, Germany, June 2007.



50. "Robust multi-microphone speech enhancement for hearing instruments", Dept. of Electrical and Computer Engineering, University of Waterloo, Canada, May 2007.
51. "Binaural noise reduction using the Interaural Wiener Filter: physical and perceptual evaluation," Joint Acoustics, Medical Physics, and Signal Processing Seminar, University of Oldenburg, Germany, Oct. 2006.
52. "Binaural Noise Reduction for Hearing Aids," ASIP-NET Seminar, Smørum, Denmark, Oct. 2006.
53. "Robust multi-microphone noise reduction in hearing instruments", ASL Seminar, McMaster University, Hamilton, Canada, Mar. 2005.
54. "Microphone array noise reduction and dereverberation techniques for speech applications", SPS Seminar, Technical University of Eindhoven, The Netherlands, Dec. 2004.
55. "Design and low-cost implementation of a robust multichannel noise reduction scheme for cochlear implants", IKA Seminar, Ruhr-University Bochum, Germany, Jan. 2004.
56. "Design and low-cost implementation of a robust multichannel noise reduction scheme for cochlear implants," IND Seminar, RWTH Aachen, Germany, Jan. 2004.
57. "Design and low-cost implementation of a robust multichannel noise reduction scheme for cochlear implants," DSP Valley Annual Research and Technology Symposium, Leuven, Belgium, Oct. 2003.
58. "Multi-microphone noise reduction and dereverberation techniques for speech applications", SPS Seminar, Technical University of Eindhoven, The Netherlands, July 2003.
59. "Applications of DSP in Audio and Digital Communications", GroepT Hogeschool, Leuven, Belgium, Dec. 2001.
60. "Multi-microphone signal enhancement techniques for noisy speech signals", TCTS Seminar, Faculté Polytechnique de Mons, Belgium, Dec. 1999.