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Hearing Systems

Publications:

Assessment of broadband snr estimation for hearing aid applications
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Effects of slow- and fast-acting compression on hearing impaired listeners' consonant-vowel identification in interrupted noise
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Investigating time-efficiency of forward masking paradigms for estimating basilar membrane input-output characteristics
Publication: Research - peer-review › Journal article – Annual report year: 2017

Modeling Speech Level as a Function of Background Noise Level and Talker-to-Listener Distance for Talkers Wearing Hearing Protection Devices
Publication: Research - peer-review › Journal article – Annual report year: 2017

Response to Comment: RE: Ohlenforst et al. (2016) Exploring the Relationship Between Working Memory, Compressor Speed, and Background Noise Characteristics, Ear Hear 37, 137–143
Publication: Research - peer-review › Letter – Annual report year: 2017

Methodology and apparatus for determining psychoacoustical threshold curves
Fereczkowski, M., MacDonald, E. & Dau, T. 31 Mar 2016
Publication: Research › Patent – Annual report year: 2016

A new procedure for automatic fitting of the basilar-membrane input-output function to individual behavioral data.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Auditory-model based assessment of the effects of hearing loss and hearing-aid compression on spectral and temporal resolution
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Exploring the Relationship Between Working Memory, Compressor Speed, and Background Noise Characteristics
Ohlenforst, B., Souza, P. E. & MacDonald, E. 2016 In : Ear and Hearing. 37, 2, p. 137-143
Publication: Research - peer-review › Journal article – Annual report year: 2016
Grid - a fast threshold tracking procedure
Fereczkowski, M., Dau, T. & MacDonald, E. 2016 Advances in Acoustics. Institute of Fundamental Technological Research (IPPT), Warsaw, p. 545-553
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Investigating low-frequency compression using the Grid method
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Lateralized speech perception in normal-hearing and hearing-impaired listeners and its relationship to temporal processing
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Model-based fitting of compression settings using narrowband stimuli
Kowalewski, B., Fereczkowski, M., MacDonald, E., Strelczyk, O. & Dau, T. 2016
Publication: Research › Poster – Annual report year: 2016

Modelling the Perceptual Components of Loudspeaker Distortion
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Predicting binaural speech intelligibility using the signal-to-noise ratio in the envelope power spectrum domain
Publication: Research - peer-review › Journal article – Annual report year: 2016

Predicting Detectability and Annoyance of EV Warning Sounds using Partial Loudness
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Predicting masking release of lateralized speech
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Temporal Fine-Structure Coding and Lateralized Speech Perception in Normal-Hearing and Hearing-Impaired Listeners
Publication: Research - peer-review › Journal article – Annual report year: 2016

Variations in voice level and fundamental frequency with changing background noise level and talker-to-listener distance while wearing hearing protectors: A pilot study
Publication: Research - peer-review › Journal article – Annual report year: 2016

Comparison of binaural microphones for externalization of sounds
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Compensation of F0 and formant frequencies in a real-time pitch-perturbation paradigm
Eckey, A. & MacDonald, E. 2015 Forschrifte der Akustik DAGA’15. p. 1444-1447
Face configuration affects speech perception: Evidence from a McGurk mismatch negativity study
Eskelund, K., MacDonald, E. & Andersen, T. 2015 In : Neuropsychologia. 66, p. 48-54
Publication: Research - peer-review › Journal article – Annual report year: 2014

Formant compensation for auditory feedback with English vowels
Publication: Research - peer-review › Journal article – Annual report year: 2015

Informational interference from a competing talker: a thought-provoking but elusive construct
Publication: Research - peer-review › Poster – Annual report year: 2015

Inversion of Auditory Spectrograms, Traditional Spectrograms, and Other Envelope Representations
Decorsière, R. J. B., Søndergaard, P. L., MacDonald, E. & Dau, T. 2015 In : I E E E Transactions on Audio, Speech and Language Processing. 23, 1, p. 46-56
Publication: Research - peer-review › Journal article – Annual report year: 2015

Reproduction of Realistic Background Noise for Testing Telecommunications Devices
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

The role of harmonic resolvability for pitch discrimination
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Time-efficient multidimensional threshold tracking method
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2015

Auditory Perception of Statistically Blurred Sound Textures
McWalter, R. I., MacDonald, E. & Dau, T. 2014
Publication: Research - peer-review › Poster – Annual report year: 2014

Capturing and reproducing realistic acoustic scenes for hearing research
Publication: Research › Ph.D. thesis – Annual report year: 2014

Consonance perception of complex-tone dyads and chords
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Electrophysiological assessment of audiovisual integration in speech perception
Publication: Research › Ph.D. thesis – Annual report year: 2014

Influence of acoustic complexity on spatial release from masking and lateralization.
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014
Interaction of Working Memory, Compressor Speed and Background Noise Characteristics
Ohlenforst, B., MacDonald, E. & Souza, P. 2014
Publication: Research - peer-review › Poster – Annual report year: 2014

Native and non-native sentence comprehension in the presence of a competing talker
Publication: Research - peer-review › Poster – Annual report year: 2014

Temporal control and compensation for perturbed voicing feedback
Publication: Research - peer-review › Journal article – Annual report year: 2014

Contribution of envelope periodicity to release from speech-on-speech masking
Publication: Research - peer-review › Journal article – Annual report year: 2013

Intelligibility of speech produced in temporally modulated noise
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Multimodal speech perception
Publication: Research - peer-review › Book chapter – Annual report year: 2013

Multivoxel Patterns Reveal Functionally Differentiated Networks Underlying Auditory Feedback Processing of Speech
Publication: Research - peer-review › Journal article – Annual report year: 2013

Playful Interaction with Voice Sensing Modular Robots
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013

Spectral information for detection of acoustic time to arrival
Publication: Research - peer-review › Journal article – Annual report year: 2013

Spectrogram inversion and potential applications for hearing research
Decorsiere, R. J. B., Dau, T., Søndergaard, P. L. & MacDonald, E. 2013 Technical University of Denmark, Department of Electrical Engineering.
Publication: Research › Ph.D. thesis – Annual report year: 2013

Speech production in amplitude-modulated noise
Publication: Research - peer-review › Conference article – Annual report year: 2013

The effect of compression on tuning estimates in a simple nonlinear auditory filter model
Publication: Research - peer-review › Conference article – Annual report year: 2013

The Relationship Between Background Noise Envelope Power and Speech Intelligibility in Adverse Conditions
Jørgensen, S., Decorsiere, R. J. B., MacDonald, E. & Dau, T. 2013
A Preliminary Study of Individual Responses to Real-Time Pitch and Formant Perturbations
MacDonald, E. & Munhall, K. G. 2012 The Listening Talker: An interdisciplinary workshop on natural and synthetic modification of speech in response to listening conditions. p. 32-35
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Children's Development of Self-Regulation in Speech Production
Publication: Research - peer-review › Journal article – Annual report year: 2012

Representational Similarity Analysis Reveals Heterogeneous Networks Supporting Speech Motor Control
Publication: Research - peer-review › Journal article – Annual report year: 2012

Word Recognition for Temporally and Spectrally Distorted Materials: The Effects of Age and Hearing Loss
Publication: Research - peer-review › Journal article – Annual report year: 2012

A cross-language study of compensation in response to real-time formant perturbation
Publication: Research - peer-review › Journal article – Annual report year: 2011

Perceiving a stranger's voice as being one's own: a 'rubber voice' illusion?
Publication: Research - peer-review › Journal article – Annual report year: 2011

Probing the independence of formant control using altered auditory feedback
Publication: Research - peer-review › Journal article – Annual report year: 2011

A cross-language study of compensatory response to formant-shifted feedback
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Compensations in response to real-time formant perturbations of different magnitudes
Publication: Research - peer-review › Journal article – Annual report year: 2010

Effects on speech intelligibility of temporal jittering and spectral smearing of the high-frequency components of speech
Publication: Research - peer-review › Journal article – Annual report year: 2010

A cross-language study of compensatory response to formant-shifted feedback.: Program abstracts of the 157th meeting of the Acoustical Society of America
Mitsuya, T., MacDonald, E., Purcell, D. W. & Munhall, K. G. 2009
Publication: Research - peer-review › Poster – Annual report year: 2009

Sensory Aging: Hearing
Publication: Research - peer-review › Book chapter – Annual report year: 2009
Talkers alter vowel production in response to real-time formant perturbation even when instructed not to compensate
Publication: Research - peer-review › Journal article – Annual report year: 2009

Auditory temporal processing deficits in older listeners: From a review to a future view of Presbycusis
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Noise exposure of opera musicians
MacDonald, E., Behar, A., Wong, W. & Kunov, H. 2008 In : Canadian Acoustics. 36, 4, p. 11-16
Publication: Research - peer-review › Journal article – Annual report year: 2008

Probing the independence of formant control
MacDonald, E., Burt, B. P. & Munhall, K. G. 2008
Publication: Research - peer-review › Poster – Annual report year: 2008

The specificity of adaptation to real-time formant shifting
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Intensity discrimination in noise: Effect of aging
Publication: Research - peer-review › Article in proceedings – Annual report year: 2007

Temporal jitter disrupts speech intelligibility: A simulation of auditory aging
Publication: Research - peer-review › Journal article – Annual report year: 2007

The specificity of sensorimotor learning: Generalization in auditory feedback adaptation
Publication: Research - peer-review › Conference abstract in proceedings – Annual report year: 2007

Noise Exposure of Music Teachers
Publication: Research - peer-review › Journal article – Annual report year: 2004

Projects:

The effect of hearing loss and noise on conversational dynamics
Serensen, A. J., MacDonald, E. & Lunner, T. F.
15/04/2017 → 14/04/2020
Project: PhD

Comparison of binaural microphones for externalization of sound
Sánchez Rodriguez, C., Cubick, J., Song, W. & MacDonald, E.
08/01/2015 → 05/07/2015
Project
Assessing hearing-aid signal processing based on variations of the Turing test
Kowalewski, B., Dau, T., Fereczkowski, M. & MacDonald, E.
15/09/2014 → 21/08/2018
Project: PhD

Computational speech segregation inspired by principles of auditory processing
Bentsen, T., Dau, T., Kressner, A. A., May, T., MacDonald, E., Bleeck, S. & Tchorz, J.
15/06/2014 → 14/09/2017
Project: PhD

Analysis of the auditory system via synthesis of natural sounds, speech and music
McWalter, R. I., Dau, T., MacDonald, E., Chait, M. & Lorenzi, C.
01/05/2013 → 14/06/2017
Project: PhD

Modeling perceptual externalization in the normal, impaired and aided-impaired auditory system
01/03/2013 → 10/05/2017
Project: PhD

Room acoustic simulation tool for optimization of absorbent ceiling
01/02/2013 → 07/09/2016
Project: PhD

Pitch representations in the impaired auditory system and implications for music perception
Bianchi, F., Dau, T., Santurette, S., MacDonald, E., Johnsruide, I. S. & Lorenzi, C.
15/12/2012 → 17/08/2016
Project: PhD

Characterization and prediction of perceptual consequences of individual hearing loss
Locsei, G., MacDonald, E., Dau, T., Santurette, S., Epp, B., Brand, T. & Kohlrausch, A.
01/09/2012 → 07/12/2016
Project: PhD

Computational auditory scene analysis based on a model of human binaural processing
Chabot-Leclerc, A., Dau, T., MacDonald, E., Marozeau, J., Culling, J. & van de Par, S.
01/04/2012 → 20/01/2016
Project: PhD

Correlations between physical and perceptual parameters of acoustic scenarios. Implications for auditory modelling and sound field design
Käsbach, J., Dau, T., Epp, B., May, T., MacDonald, E., Tchorz, J. & Whitmer, W. M.
01/12/2011 → 02/11/2016
Project: PhD

Design and evaluation of individualized hearing-aid signal processing and fitting
Fereczkowski, M., MacDonald, E., Dau, T., Jepsen, M. L., Marozeau, J., Lopez-Poveda, E. A. & Plack, C. J.
15/07/2011 → 18/09/2015
Project: PhD

Temporal Coherence in the Perceptual Organization of Auditory Scenes in Normal, Impaired, and Aided-Impaired Hearing
Christiansen, S. K., Dau, T., Jepsen, M. L., MacDonald, E., Brown, G. J. & Shamma, S.
15/04/2011 → 12/12/2014
Project: PhD
Neurale og perceptuelle aspekter af audiovisuel taleretning
Eskelund, K., Andersen, T., Dau, T., MacDonald, E., Mørup, M., Gondan-Rochon, M. & Rosenblum, L. D.
01/02/2011 → 25/09/2014
Project: PhD

Characterizing human auditory processing in reverberant environments with multiple sound sources
Marschall, M., Dau, T., Buchholz, J., MacDonald, E., Brunskog, J., Pulkki, V. T. & Spors, S.
01/08/2010 → 12/12/2014
Project: PhD

Speech intelligibility enhancement using modern envelope and phase manipulations
Decorsière, R. J. B., Dau, T., MacDonald, E., Søndergaard, P. L., Agerkvist, F. T., Ghitza, O. & Stone, M. A.
15/02/2010 → 19/11/2013
Project: PhD

Modelling human auditory-evoked brain responses to complex sounds
01/03/2009 → 25/01/2013
Project: PhD