

# Contents

<b>Effects of Age and Hearing Loss on the Processing of Auditory Temporal Fine Structure .....</b>	<b>1</b>
Brian C. J. Moore	
<b>Aging Effects on Behavioural Estimates of Suppression with Short Suppressors .....</b>	<b>9</b>
Erica L. Hegland and Elizabeth A. Strickland	
<b>Contributions of Coding Efficiency of Temporal-Structure and Level Information to Lateralization Performance in Young and Early-Elderly Listeners .....</b>	<b>19</b>
Atsushi Ochi, Tatsuya Yamasoba and Shigeto Furukawa	
<b>Investigating the Role of Working Memory in Speech-in-noise Identification for Listeners with Normal Hearing .....</b>	<b>29</b>
Christian Füllgrabe and Stuart Rosen	
<b>The Contribution of Auditory and Cognitive Factors to Intelligibility of Words and Sentences in Noise .....</b>	<b>37</b>
Antje Heinrich and Sarah Knight	
<b>Do Hearing Aids Improve Affect Perception? .....</b>	<b>47</b>
Juliane Schmidt, Diana Herzog, Odette Scharenborg and Esther Janse	
<b>Suitability of the Binaural Interaction Component for Interaural Electrode Pairing of Bilateral Cochlear Implants.....</b>	<b>57</b>
Hongmei Hu, Birger Kollmeier and Mathias Dietz	
<b>Binaural Loudness Constancy .....</b>	<b>65</b>
John F. Culling and Helen Dare	

**Intelligibility for Binaural Speech with Discarded Low-SNR Speech Components** ..... 73  
 Esther Schoenmaker and Steven van de Par

**On the Contribution of Target Audibility to Performance in Spatialized Speech Mixtures** ..... 83  
 Virginia Best, Christine R. Mason, Jayaganesh Swaminathan, Gerald Kidd, Kasey M. Jakien, Sean D. Kappel, Frederick J. Gallun, Jörg M. Buchholz and Helen Glyde

**Optimization of a Spectral Contrast Enhancement Algorithm for Cochlear Implants Based on a Vowel Identification Model** ..... 93  
 Waldo Nogueira, Thilo Rode and Andreas Büchner

**Roles of the Contralateral Efferent Reflex in Hearing Demonstrated with Cochlear Implants** ..... 105  
 Enrique A. Lopez-Poveda, Almudena Eustaquio-Martín, Joshua S. Stohl, Robert D. Wolford, Reinhold Schatzer and Blake S. Wilson

**Deactivating Cochlear Implant Electrodes Based on Pitch Information for Users of the ACE Strategy** ..... 115  
 Deborah Vickers, Aneeka Degun, Angela Canas, Thomas Stainsby and Filiep Vanpoucke

**Speech Masking in Normal and Impaired Hearing: Interactions Between Frequency Selectivity and Inherent Temporal Fluctuations in Noise** ..... 125  
 Andrew J. Oxenham and Heather A. Kreft

**Effects of Pulse Shape and Polarity on Sensitivity to Cochlear Implant Stimulation: A Chronic Study in Guinea Pigs** ..... 133  
 Olivier Macherey and Yves Cazals

**Assessing the Firing Properties of the Electrically Stimulated Auditory Nerve Using a Convolution Model** ..... 143  
 Stefan B. Strahl, Dyan Ramekers, Marjolijn M. B. Nagelkerke, Konrad E. Schwarz, Philipp Spitzer, Sjaak F. L. Klis, Wilko Grolman and Huib Versnel

**Modeling the Individual Variability of Loudness Perception with a Multi-Category Psychometric Function** ..... 155  
 Andrea C. Trevino, Walt Jesteadt and Stephen T. Neely

<b>Auditory fMRI of Sound Intensity and Loudness for Unilateral Stimulation</b> .....	165
Oliver Behler and Stefan Uppenkamp	
<b>Tinnitus- and Task-Related Differences in Resting-State Networks</b> .....	175
Cris Lanting, Aron Woźniak, Pim van Dijk and Dave R. M. Langers	
<b>The Role of Conduction Delay in Creating Sensitivity to Interaural Time Differences</b> .....	189
Catherine Carr, Go Ashida, Hermann Wagner, Thomas McColgan and Richard Kempfer	
<b>Objective Measures of Neural Processing of Interaural Time Differences</b> .....	197
David McAlpine, Nicholas Haywood, Jaime Undurraga and Torsten Marquardt	
<b>Minimum Audible Angles Measured with Simulated Normally-Sized and Oversized Pinnae for Normal-Hearing and Hearing-Impaired Test Subjects</b> .....	207
Filip M. Rønne, Søren Laugesen, Niels S. Jensen and Julie H. Pedersen	
<b>Moving Objects in the Barn Owl's Auditory World</b> .....	219
Ulrike Langemann, Bianca Krumm, Katharina Liebner, Rainer Beutelmann and Georg M. Klump	
<b>Change Detection in Auditory Textures</b> .....	229
Yves Boubenec, Jennifer Lawlor, Shihab Shamma and Bernhard Englitz	
<b>The Relative Contributions of Temporal Envelope and Fine Structure to Mandarin Lexical Tone Perception in Auditory Neuropathy Spectrum Disorder</b> .....	241
Shuo Wang, Ruijuan Dong, Dongxin Liu, Luo Zhang and Li Xu	
<b>Interaction of Object Binding Cues in Binaural Masking Pattern Experiments</b> .....	249
Jesko L. Verhey, Björn Lübken and Steven van de Par	
<b>Speech Intelligibility for Target and Masker with Different Spectra</b> .....	257
Thibaud Leclère, David Théry, Mathieu Lavandier and John F. Culling	
<b>Dynamics of Cochlear Nonlinearity</b> .....	267
Nigel P. Cooper and Marcel van der Heijden	
<b>Responses of the Human Inner Ear to Low-Frequency Sound</b> .....	275
Markus Drexler, Eike Krause, Robert Gürkov and Lutz Wiegbe	

**Suppression Measured from Chinchilla Auditory-Nerve-Fiber Responses Following Noise-Induced Hearing Loss: Adaptive-Tracking and Systems-Identification Approaches ..... 285**  
 Mark Sayles, Michael K. Walls and Michael G. Heinz

**Does Signal Degradation Affect Top–Down Processing of Speech? ..... 297**  
 Anita Wagner, Carina Pals, Charlotte M. de Blecourt, Anastasios Sarampalis Deniz Başkent

**The Effect of Peripheral Compression on Syllable Perception Measured with a Hearing Impairment Simulator ..... 307**  
 Toshie Matsui, Toshio Irino, Misaki Nagae, Hideki Kawahara and Roy D. Patterson

**Towards Objective Measures of Functional Hearing Abilities ..... 315**  
 Hamish Innes-Brown, Renee Tsongas, Jeremy Marozeau and Colette McKay

**Connectivity in Language Areas of the Brain in Cochlear Implant Users as Revealed by fNIRS ..... 327**  
 Colette M. McKay, Adnan Shah, Abd-Krim Seghouane, Xin Zhou, William Cross and Ruth Litovsky

**Isolating Neural Indices of Continuous Speech Processing at the Phonetic Level ..... 337**  
 Giovanni M. Di Liberto and Edmund C. Lalor

**Entracking as a Brain Stem Code for Pitch: The Butte Hypothesis ..... 347**  
 Philip X Joris

**Can Temporal Fine Structure and Temporal Envelope be Considered Independently for Pitch Perception? ..... 355**  
 Nicolas Grimault

**Locating Melody Processing Activity in Auditory Cortex with Magnetoencephalography ..... 363**  
 Roy D. Patterson, Martin Andermann, Stefan Uppenkamp and André Rupp

**Studying Effects of Transcranial Alternating Current Stimulation on Hearing and Auditory Scene Analysis ..... 371**  
 Lars Riecke

**Functional Organization of the Ventral Auditory Pathway ..... 381**  
 Yale E. Cohen, Sharath Bennur, Kate Christison-Lagay, Adam Gifford and Joji Tsunada

**Neural Segregation of Concurrent Speech: Effects of Background Noise and Reverberation on Auditory Scene Analysis in the Ventral Cochlear Nucleus.....** 389  
 Mark Sayles, Arkadiusz Stasiak and Ian M. Winter

**Audio Visual Integration with Competing Sources in the Framework of Audio Visual Speech Scene Analysis .....** 399  
 Attigodu Chandrashekara Ganesh, Frédéric Berthommier and Jean-Luc Schwartz

**Relative Pitch Perception and the Detection of Deviant Tone Patterns....** 409  
 Susan L. Denham, Martin Coath, Gábor P. Háden, Fiona Murray and István Winkler

**Do Zwicker Tones Evoke a Musical Pitch?.....** 419  
 Hedwig E. Gockel and Robert P. Carlyon

**Speech Coding in the Midbrain: Effects of Sensorineural Hearing Loss .....** 427  
 Laurel H. Carney, Duck O. Kim and Shigeyuki Kuwada

**Sources of Variability in Consonant Perception and Implications for Speech Perception Modeling.....** 437  
 Johannes Zaar and Torsten Dau

**On Detectable and Meaningful Speech-Intelligibility Benefits.....** 447  
 William M. Whitmer, David McShefferty and Michael A. Akeroyd

**Individual Differences in Behavioural Decision Weights Related to Irregularities in Cochlear Mechanics .....** 457  
 Jungmee Lee, Inseok Heo, An-Chieh Chang, Kristen Bond, Christophe Stoelinga, Robert Lutfi and Glenis Long

**On the Interplay Between Cochlear Gain Loss and Temporal Envelope Coding Deficits .....** 467  
 Sarah Verhulst, Patrycja Piktel, Anoop Jagadeesh and Manfred Mauermann

**Frequency Tuning of the Efferent Effect on Cochlear Gain in Humans.....** 477  
 Vit Drga, Christopher J. Plack and Ifat Yasin

**Erratum.....** E1

# Contributors

**Michael A. Akeroyd** MRC Institute of Hearing Research, Nottingham, UK

**Martin Andermann** Section of Biomagnetism, Department of Neurology, University of Heidelberg, Heidelberg, Germany

**Go Ashida** Cluster of Excellence “Hearing4all”, University of Oldenburg, Oldenburg, Germany

**Andreas Büchner** Dept. of Otolaryngology and Hearing4all, Medical University Hannover, Hannover, Germany

**Deniz Başkent** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Oliver Behler** Medizinische Physik, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany

**Sharath Bennur** Department of Otorhinolaryngology, University of Pennsylvania, Philadelphia, USA

**Frédéric Berthommier** Grenoble Images Parole Signal Automatique-Lab, Speech and Cognition Department, CNRS, Grenoble University, Grenoble, France

**Virginia Best** Department of Speech, Language and Hearing Sciences, Boston University, Boston, MA, USA

**Rainer Beutelmann** Cluster of Excellence “Hearing4all”, Animal Physiology and Behaviour Group, Department for Neuroscience, University of Oldenburg, Oldenburg, Germany

**Charlotte M. de Blecourt** Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Kristen Bond** Auditory Behavioral Research Laboratory, Communication Sciences and Disorders, University of Wisconsin-Madison, Madison, WI, USA

**Yves Boubenec** Laboratoire des Systèmes Perceptifs, CNRS UMR 8248, Paris, France

Département d'études cognitives, Ecole normale supérieure PSL Research University, Paris, France

**Jörg M. Buchholz** National Acoustic Laboratories, Macquarie University, Sydney, NSW, Australia

**Angela Canas** UCL Ear Institute, London, UK

**Robert P. Carlyon** MRC Cognition and Brain Sciences Unit, Cambridge, UK

**Laurel H. Carney** Departments of Biomedical Engineering, Neurobiology & Anatomy, Electrical & Computer Engineering, University of Rochester, Rochester, NY, USA

**Catherine Carr** Department of Biology, University of Maryland, College Park, MD, USA

**Yves Cazals** LNIA-CNRS, UMR 7260, Aix-Marseille Univ., Marseille, France

**An-Chieh Chang** Auditory Behavioral Research Laboratory, Communication Sciences and Disorders, University of Wisconsin-Madison, Madison, WI, USA

**Kate Christison-Lagay** Neuroscience Graduate Group, University of Pennsylvania, Philadelphia, USA

**Martin Coath** Cognition Institute and School of Psychology, Plymouth University, Plymouth, UK

**Yale E. Cohen** Department of Otorhinolaryngology, University of Pennsylvania, Philadelphia, USA

Department of Neuroscience, University of Pennsylvania, Philadelphia, USA

Department of Bioengineering, University of Pennsylvania, Philadelphia, USA

**Nigel P. Cooper** Erasmus MC, Rotterdam, Nederland

**William Cross** The Bionics Institute of Australia, Melbourne, Australia

Department of Medicine, The University of Melbourne, Melbourne, Australia

**John F. Culling** School of Psychology, Cardiff University, Cardiff, UK

**Helen Dare** School of Psychology, Cardiff University, Cardiff, UK

**Torsten Dau** Hearing Systems Group, Department of Electrical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark

**Steven van de Par** Acoustics Group, Cluster of Excellence "Hearing4All", Carl von Ossietzky University, Oldenburg, Germany

**Aneeka Degun** UCL Ear Institute, London, UK

**Susan L. Denham** Cognition Institute and School of Psychology, Plymouth University, Plymouth, UK

**Giovanni M. Di Liberto** Trinity College Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland

School of Engineering, Trinity College Dublin, Dublin, Ireland

Trinity Centre for Bioengineering, Trinity College Dublin, Dublin, Ireland

**Mathias Dietz** Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

**Pim van Dijk** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Ruijuan Dong** Otolaryngology—Head & Neck Surgery, Beijing Tongren Hospital, Beijing Institute of Otolaryngology, Capital Medical University, Beijing, China

**Markus Drexl** German Center for Vertigo and Balance Disorders (IFB), Department of Otorhinolaryngology, Head and Neck Surgery, Grosshadern Medical Centre, University of Munich, Munich, Germany

**Vit Drga** Ear Institute, University College London (UCL), London, UK

**Bernhard Englitz** Laboratoire des Systèmes Perceptifs, CNRS UMR 8248, Paris, France

Département d'études cognitives, Ecole normale supérieure PSL Research University, Paris, France

Department of Neurophysiology, Donders Centre for Neuroscience, Radboud Universiteit Nijmegen, Nijmegen, The Netherlands

**Almudena Eustaquio-Martín** INCYL, IBSAL, Universidad de Salamanca, Salamanca, Spain

**Christian Füllgrabe** MRC Institute of Hearing Research, Nottingham, UK

**Shigeto Furukawa** Human Information Science Laboratory, NTT Communication Science Laboratories, NTT Corporation, Atsugi, Japan

**Robert Gürkov** German Center for Vertigo and Balance Disorders (IFB), Department of Otorhinolaryngology, Head and Neck Surgery, Grosshadern Medical Centre, University of Munich, Munich, Germany

**Frederick J. Gallun** National Center for Rehabilitative Auditory Research, VA Portland Health Care System, Portland, OR, USA



**Attigodu Chandrashekara Ganesh** Grenoble Images Parole Signal Automatique-Lab, Speech and Cognition Department, CNRS, Grenoble University, Grenoble, France

**Adam M. Gifford** Neuroscience Graduate Group, University of Pennsylvania, Philadelphia, USA

**Helen Glyde** National Acoustic Laboratories, Macquarie University, Sydney, NSW, Australia

**Hedwig E. Gockel** MRC Cognition and Brain Sciences Unit, Cambridge, UK

**Nicolas Grimault** Centre de Recherche en Neurosciences de Lyon, CNRS UMR 5292, Université Lyon 1, Lyon, France

**Wilko Grolman** Department of Otorhinolaryngology and Head & Neck Surgery, University Medical Center Utrecht, Utrecht, The Netherlands

**Gábor P. Háden** Institute of Cognitive Neuroscience and Psychology, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary

**Nicholas Haywood** UCL Ear Institute, London, UK

**Erica L. Hegland** Purdue University, West Lafayette, IN, USA

**Marcel van der Heijden** Erasmus MC, Rotterdam, Nederland

**Antje Heinrich** MRC Institute of Hearing Research, Nottingham, UK

**Michael G. Heinz** Department of Speech, Language, & Hearing Sciences, Purdue University, West Lafayette, IN, USA

Weldon School of Biomedical Engineering, Purdue University, West Lafayette, IN, USA

**Inseok Heo** Auditory Behavioral Research Laboratory, Communication Sciences and Disorders, University of Wisconsin-Madison, Madison, WI, USA

**Diana Herzog** Phonak AG, Staefa, Switzerland

**Hongmei Hu** Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

**Hamish Innes-Brown** Bionics Institute, Melbourne, Australia

Research Group Experimental Oto-laryngology, KU Leuven, Leuven, Belgium

**Toshio Irino** Faculty of Systems Engineering, Wakayama University, Wakayama-city, Japan

**Anoop Jagadeesh** Medizinische Physik and Cluster of Excellence Hearing4all, Department of Medical Physics and Acoustics, Oldenburg University, Oldenburg, Germany

**Kasey M. Jakien** National Center for Rehabilitative Auditory Research, VA Portland Health Care System, Portland, OR, USA

**Esther Janse** Centre for Language Studies, Radboud University, Nijmegen, HD, The Netherlands

Donders Institute for Brain, Cognition and Behavior, Nijmegen, GL, The Netherlands

Max Planck Institute for Psycholinguistics, Nijmegen, AH, The Netherlands

**Niels S. Jensen** Eriksholm Research Centre, Snekkersten, Denmark

**Walt Jesteadt** Boys Town National Research Hospital, Omaha, USA

**Philip X Joris** Laboratory of Auditory Neurophysiology, University of Leuven, Leuven, Belgium

**Sean D. Kempel** National Center for Rehabilitative Auditory Research, VA Portland Health Care System, Portland, OR, USA

**Hideki Kawahara** Faculty of Systems Engineering, Wakayama University, Wakayama-city, Japan

**Richard Kempfer** Institute for Theoretical Biology, Department of Biology, Humboldt-Universität zu Berlin, Berlin, Germany

**Gerald Kidd** Department of Speech, Language and Hearing Sciences, Boston University, Boston, MA, USA

**Duck O. Kim** Department of Neuroscience, University of Connecticut Health Center, Farmington, CT, USA

**Sjaak F.L. Klis** Department of Otorhinolaryngology and Head & Neck Surgery, University Medical Center Utrecht, Utrecht, The Netherlands

**Georg M. Klump** Cluster of Excellence “Hearing4all”, Animal Physiology and Behaviour Group, Department for Neuroscience, University of Oldenburg, Oldenburg, Germany

**Sarah Knight** MRC Institute of Hearing Research, Nottingham, UK

**Birger Kollmeier** Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

**Eike Krause** German Center for Vertigo and Balance Disorders (IFB), Department of Otorhinolaryngology, Head and Neck Surgery, Grosshadern Medical Centre, University of Munich, Munich, Germany

**Heather A. Kreft** Department of Otolaryngology, University of Minnesota—Twin Cities, Minneapolis, MN, USA

**Bianca Krumm** Cluster of Excellence “Hearing4all”, Animal Physiology and Behaviour Group, Department for Neuroscience, University of Oldenburg, Oldenburg, Germany

**Shigeyuki Kuwada** Department of Neuroscience, University of Connecticut Health Center, Farmington, CT, USA

**Björn Lübken** Department of Experimental Audiology, Otto von Guericke University Magdeburg, Magdeburg, Germany

**Edmund C. Lalor** Trinity College Institute of Neuroscience, Trinity College Dublin, Dublin, Ireland

School of Engineering, Trinity College Dublin, Dublin, Ireland

Trinity Centre for Bioengineering, Trinity College Dublin, Dublin, Ireland

**Ulrike Langemann** Cluster of Excellence “Hearing4all”, Animal Physiology and Behaviour Group, Department for Neuroscience, University of Oldenburg, Oldenburg, Germany

**Dave R. M. Langers** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Cris Lanting** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Søren Laugesen** Eriksholm Research Centre, Snekkersten, Denmark

**Mathieu Lavandier** Laboratoire Génie Civil et Bâtiment, ENTPE, Université de Lyon, Vaulx-en-Velin, France

**Jennifer Lawlor** Laboratoire des Systèmes Perceptifs, CNRS UMR 8248, Paris, France

Département d'études cognitives, Ecole normale supérieure PSL Research University, Paris, France

**Thibaud Leclère** Laboratoire Génie Civil et Bâtiment, ENTPE, Université de Lyon, Vaulx-en-Velin, France

**Jungmee Lee** Auditory Behavioral Research Laboratory, Communication Sciences and Disorders, University of Wisconsin-Madison, Madison, WI, USA

**Katharina Liebner** Cluster of Excellence “Hearing4all”, Animal Physiology and Behaviour Group, Department for Neuroscience, University of Oldenburg, Oldenburg, Germany

**Ruth Litovsky** Waisman Center, The University of Wisconsin-Madison, Madison, USA

**Dongxin Liu** Otolaryngology—Head & Neck Surgery, Beijing Tongren Hospital, Beijing Institute of Otolaryngology, Capital Medical University, Beijing, China

**Glenis Long** Speech-Language-Hearing Sciences, Graduate Center of City University of New York, New York, NY, USA

**Enrique A. Lopez-Poveda** INCYL, IBSAL, Dpto. Cirugía, Facultad de Medicina, Universidad de Salamanca, Salamanca, Spain

**Robert Lutfi** Auditory Behavioral Research Laboratory, Communication Sciences and Disorders, University of Wisconsin-Madison, Madison, WI, USA

**Olivier Macherey** LMA-CNRS, UPR 7051, Aix-Marseille Univ., Centrale Marseille, Marseille, France

**Jeremy Marozeau** Bionics Institute, Melbourne, Australia

Department of Electrical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark

**Torsten Marquardt** UCL Ear Institute, London, UK

**Christine R. Mason** Department of Speech, Language and Hearing Sciences, Boston University, Boston, MA, USA

**Toshie Matsui** Faculty of Systems Engineering, Wakayama University, Wakayama-city, Japan

**Manfred Mauermann** Medizinische Physik and Cluster of Excellence Hearing4all, Department of Medical Physics and Acoustics, Oldenburg University, Oldenburg, Germany

**David McAlpine** UCL Ear Institute, London, UK

**Thomas McColgan** Institute for Theoretical Biology, Department of Biology, Humboldt-Universität zu Berlin, Berlin, Germany

**Colette McKay** The Bionics Institute of Australia, Melbourne, Australia

Department of Medical Bionics, The University of Melbourne, Melbourne, Australia

**David McShefferty** MRC/CSO Institute of Hearing Research—Scottish Section, Glasgow, UK

**Brian C.J. Moore** Department of Experimental Psychology, University of Cambridge, Cambridge, UK

**Fiona Murray** School of Psychology, Plymouth University, Plymouth, UK

**Misaki Nagae** Faculty of Systems Engineering, Wakayama University, Wakayama-city, Japan

**Marjolijn M.B. Nagelkerke** Department of Otorhinolaryngology and Head & Neck Surgery, University Medical Center Utrecht, Utrecht, The Netherlands

**Stephen T. Neely** Boys Town National Research Hospital, Omaha, USA

**Waldo Nogueira** Dept. of Otolaryngology and Hearing4all, Medical University Hannover, Hannover, Germany

**Atsushi Ochi** Department of Otolaryngology, Faculty of Medicine, University of Tokyo, Tokyo, Japan

**Andrew J. Oxenham** Departments of Psychology and Otolaryngology, University of Minnesota—Twin Cities, Minneapolis, MN, USA

**Carina Pals** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

**Roy D. Patterson** Department of Physiology, Development and Neuroscience, Centre for the Neural Basis of Hearing, University of Cambridge, Cambridge, UK  
Department of Physiology, Development and Neuroscience, University of Cambridge, Cambridge, UK

**Julie H. Pedersen** Eriksholm Research Centre, Snekkersten, Denmark

**Patrycja Piktel** Medizinische Physik and Cluster of Excellence Hearing4all, Department of Medical Physics and Acoustics, Oldenburg University, Oldenburg, Germany

**Christopher J. Plack** School of Psychological Sciences, The University of Manchester, Manchester, UK

**Filip M. Rønne** Eriksholm Research Centre, Snekkersten, Denmark

**Dyan Ramekers** Department of Otorhinolaryngology and Head & Neck Surgery, University Medical Center Utrecht, Utrecht, The Netherlands

**Lars Riecke** Department of Cognitive Neuroscience, Maastricht University, Maastricht, The Netherlands

**Thilo Rode** HörSys GmbH, Hannover, Germany

**Stuart Rosen** UCL Speech, Hearing & Phonetic Sciences, London, UK

**André Rupp** Section of Biomagnetism, Department of Neurology, University of Heidelberg, Heidelberg, Germany

**Anastasios Sarampalis** Department of Psychology, University of Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Mark Sayles** Department of Speech, Language, & Hearing Sciences, Purdue University, West Lafayette, IN, USA

Laboratory of Auditory Neurophysiology, Katholieke Universiteit Leuven, Leuven, Belgium

**Mark Sayles** Centre for the Neural Basis of Hearing, The Physiological Laboratory, Department of Physiology, Development and Neuroscience, Cambridge, UK

Laboratory of Auditory Neurophysiology, Campus Gasthuisberg, Leuven, Belgium

**Odette Scharenborg** Centre for Language Studies, Radboud University, Nijmegen, HD, The Netherlands

Donders Institute for Brain, Cognition and Behavior, Nijmegen, GL, The Netherlands

**Reinhold Schatzer** Institute of Mechatronics, University of Innsbruck, Innsbruck, Austria

**Juliane Schmidt** Centre for Language Studies, Radboud University, Nijmegen, HD, The Netherlands

**Esther Schoenmaker** Acoustics Group, Cluster of Excellence “Hearing4All”, Carl von Ossietzky University, Oldenburg, Germany

**Jean-Luc Schwartz** Grenoble Images Parole Signal Automatique-Lab, Speech and Cognition Department, CNRS, Grenoble University, Grenoble, France

**Konrad E. Schwarz** R&D MED-EL GmbH, Innsbruck, Austria

**Abd-Krim Seghouane** Department of Electrical and Electronic Engineering, The University of Melbourne, Melbourne, Australia

**Adnan Shah** The Bionics Institute of Australia, Melbourne, Australia

Department of Electrical and Electronic Engineering, The University of Melbourne, Melbourne, Australia

**Shihab Shamma** Laboratoire des Systèmes Perceptifs, CNRS UMR 8248, Paris, France

Département d'études cognitives, Ecole normale supérieure PSL Research University, Paris, France

Neural Systems Laboratory, University of Maryland, College Park, MD, USA

**Philipp Spitzer** R&D MED-EL GmbH, Innsbruck, Austria

**Thomas Stainsby** Cochlear Technology Centre, Mechelen, Belgium

**Arkadiusz Stasiak** Centre for the Neural Basis of Hearing, The Physiological Laboratory, Department of Physiology, Development and Neuroscience, Cambridge, UK

**Christophe Stoelinga** Auditory Behavioral Research Laboratory, Communication Sciences and Disorders, University of Wisconsin-Madison, Madison, WI, USA

**Joshua S. Stohl** MED-EL Corporation, Durham, NC, USA

**Stefan B. Strahl** R&D MED-EL GmbH, Innsbruck, Austria

**Elizabeth A. Strickland** Purdue University, West Lafayette, IN, USA

**Jayaganesh Swaminathan** Department of Speech, Language and Hearing Sciences, Boston University, Boston, MA, USA

**David Théry** Laboratoire Génie Civil et Bâtiment, ENTPE, Université de Lyon, Vaulx-en-Velin, France

**Andrea C. Trevino** Boys Town National Research Hospital, Omaha, USA

**Renee Tsongas** Bionics Institute, Melbourne, Australia

**Joji Tsunada** Department of Otorhinolaryngology, University of Pennsylvania, Philadelphia, USA

**Jaime Undurraga** UCL Ear Institute, London, UK

**Stefan Uppenkamp** Medizinische Physik and Cluster of Excellence Hearing4All, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany

**Steven van de Par** Acoustics group, Cluster of Excellence “Hearing4All”, Carl von Ossietzky Universität Oldenburg, Oldenburg, Germany

**Filipe Vanpoucke** Cochlear Technology Centre, Mechelen, Belgium

**Jesko L. Verhey** Department of Experimental Audiology, Otto von Guericke University Magdeburg, Magdeburg, Germany

**Sarah Verhulst** Medizinische Physik and Cluster of Excellence Hearing4all, Department of Medical Physics and Acoustics, Oldenburg University, Oldenburg, Germany

**Huib Versnel** Department of Otorhinolaryngology and Head & Neck Surgery, University Medical Center Utrecht, Utrecht, The Netherlands

**Deborah Vickers** UCL Ear Institute, London, UK

**Anita Wagner** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Hermann Wagner** Institute for Biology II, RWTH Aachen, Aachen, Germany

**Michael K. Walls** Department of Speech, Language, & Hearing Sciences, Purdue University, West Lafayette, IN, USA

**Shuo Wang** Otolaryngology—Head & Neck Surgery, Beijing Tongren Hospital, Beijing Institute of Otolaryngology, Capital Medical University, Beijing, China

**William M. Whitmer** MRC/CSO Institute of Hearing Research—Scottish Section, Glasgow, UK

**Lutz Wiegrebe** Division of Neurobiology, Dept. Biology II, University of Munich, Martinsried, Germany

**Blake S. Wilson** Duke University, Durham, NC, USA

**István Winkler** Institute of Cognitive Neuroscience and Psychology, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary

Institute of Psychology, University of Szeged, Szeged, Hungary

**Ian M. Winter** Centre for the Neural Basis of Hearing, The Physiological Laboratory, Department of Physiology, Development and Neuroscience, Cambridge, UK

**Aron Woźniak** Department of Otorhinolaryngology / Head and Neck Surgery, University of Groningen, University Medical Center Groningen, Groningen, The Netherlands

Graduate School of Medical Sciences (Research School of Behavioural and Cognitive Neurosciences), University of Groningen, Groningen, The Netherlands

**Robert D. Wolford** MED-EL Corporation, Durham, NC, USA

**Li Xu** Communication Sciences and Disorders, Ohio University, Athens, OH, USA

**Tatsuya Yamasoba** Department of Otolaryngology, Faculty of Medicine, University of Tokyo, Tokyo, Japan

**Ifat Yasin** Ear Institute, University College London (UCL), London, UK

**Johannes Zaar** Hearing Systems Group, Department of Electrical Engineering, Technical University of Denmark, Kongens Lyngby, Denmark

**Luo Zhang** Otolaryngology—Head & Neck Surgery, Beijing Tongren Hospital, Beijing Institute of Otolaryngology, Capital Medical University, Beijing, China

**Xin Zhou** The Bionics Institute of Australia, Melbourne, Australia

Department of Medical Bionics, The University of Melbourne, Melbourne, Australia