The Neurophysiological Bases of Auditory Perception

Enrique A. Lopez-Poveda • Alan R. Palmer
Ray Meddis
Editors

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Springer

Editors

Enrique A. Lopez-Poveda
Universidad de Salamanca
Institute of Neurociencias de Castilla
y León
C/Pintor Fernando Gallego 1
37007 Salamanca
Spain
ealopezpoveda@usal.es

Alan R. Palmer
MRC Institute of Hearing Research
University Park
Nottingham
United Kingdom
alan@ihr.mrc.ac.uk

Ray Meddis
University of Essex
Wivenhoe Park
Colchester, Essex
United Kingdom
rmeddis@essex.ac.uk

ISBN 978-1-4419-5685-9 e-ISBN 978-1-4419-5686-6
DOI 10.1007/978-1-4419-5686-6
Springer New York Dordrecht Heidelberg London

Library of Congress Control Number: 2009943543

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Printed on acid-free paper

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Preface

This volume contains the papers presented at the 15th International Symposium on Hearing (ISH), which was held at the Hotel Regio, Santa Marta de Tormes, Salamanca, Spain, between 1st and 5th June 2009.

Since its inception in 1969, this Symposium has been a forum of excellence for debating the neurophysiological basis of auditory perception, with computational models as tools to test and unify physiological and perceptual theories. Every paper in this symposium includes two of the following: auditory physiology, psychophysics or modeling. The topics range from cochlear physiology to auditory attention and learning. While the symposium is always hosted by European countries, participants come from all over the world and are among the leaders in their fields. The result is an outstanding symposium, which has been described by some as a “world summit of auditory research.”

The current volume has a bottom-up structure from “simpler” physiological to more “complex” perceptual phenomena and follows the order of presentations at the meeting. Parts I to III are dedicated to information processing in the peripheral auditory system and its implications for auditory masking, spectral processing, and coding. Part IV focuses on the physiological bases of pitch and timbre perception. Part V is dedicated to binaural hearing. Parts VI and VII cover recent advances in understanding speech processing and perception and auditory scene analysis. Part VIII focuses on the neurophysiological bases of novelty detection, attention, and learning. Finally, Part IX describes novel results and ideas on hearing impairment. Some chapters have appended a written discussion by symposium participants; a form of online review that significantly enhances the quality of the content. In summary, the volume describes state-of-the-art knowledge on the most current topics of auditory science and will hopefully act as a valuable resource to stimulate further research.

It is not possible to organize a meeting of this size and importance without a considerable amount of help. We would like to express our most sincere thanks to the organizing team: Almudena Eustaquio-Martín, Jorge Martín Méndez, Patricia Pérez González, Peter T. Johannesen, and Christian Sánchez Belloso, whose expertise and willing help were essential to the smooth running of the meeting and preparation of this volume. Many thanks also to the staff of the Fundación General de la Universidad de Salamanca for their skillful and unconditional support with the administrative aspects of the organization. We are very grateful for the generosity

of our sponsors: the Institute of Neuroscience of Castilla y León, the University of Salamanca, GAES S.A, Oticon España S.A, and, very specially, MED-EL.

Finally, we would like to thank all authors and participants for the high quality of their scientific contributions and for their cheerful conviviality during the meeting. The first editor wishes to thank all participants for generously and enthusiastically allowing this extraordinary symposium to take part in Spain for the first time ever.

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Nottingham, UK
Colchester, UK

Enrique A. Lopez-Poveda
Alan R. Palmer
Ray Meddis

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Participants of the 15th International Symposium on Hearing

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About the Editors

Enrique A. Lopez-Poveda, Ph.D. is the director of the Auditory Computation and Psychoacoustics Unit of the Neuroscience Institute of Castilla y León (University of Salamanca, Spain). His research focuses on the understanding and modeling of human cochlear nonlinear signal processing and the role of the peripheral auditory system in normal and impaired auditory perception. He has authored over 45 scientific papers and book chapters and is the co-editor of the book *Computational Models of the Auditory System (Springer Handbook of Auditory Research)*. He has been principal investigator, participant, and consultant on numerous research projects. He is a fellow of the Acoustical Society of America and a member of the Association for Research in Otolaryngology.

Alan R. Palmer, Ph.D. is Deputy Director of the MRC Institute of Hearing Research and holds a Special Professorship in neuroscience at the University of Nottingham, UK. He received his first degree in Biological Sciences from the University of Birmingham, UK and his PhD in Communication and Neuroscience from the University of Keele, UK. After postdoctoral research at Keele, he established his own laboratory at the National Institute for Medical Research in London. This was followed by a Royal Society University Research Fellowship at the University of Sussex before taking a program leader position at the Medical Research Council Institute for Hearing Research in 1986. He heads a research team that uses neurophysiological, computational, and neuroanatomical techniques to study the way the brain processes sound.

Ray Meddis, Ph.D. is the director of the Hearing Research Laboratory at the University of Essex, England. His research has concentrated on the development of computer models of the physiology of the auditory periphery and how these can be incorporated into models of psychophysical phenomena such as pitch and auditory scene analysis. He has published extensively in this area. He is the co-editor of the book *Computational Models of the Auditory System (Springer Handbook of Auditory Research)*. His current research concerns the application of computer models to an understanding of hearing impairment. He is a fellow of the Acoustical Society of America and a member of the Association of Research in Otolaryngology.

Contributors

Trevor R. Agus

CNRS & Université Paris Descartes & École normale supérieure, Paris, France

Jont B. Allen

ECE Department, University of Illinois at Urbana-Champaign, Urbana, IL, USA

Ana Alves-Pinto

MRC Institute of Hearing Research, University Park, Nottingham, UK

Flora Antunes

Auditory Neurophysiology Unit, Institute for Neuroscience of Castilla y Leon, Spain

Yoshie Aoki

Faculty of Systems Engineering, Wakayama University, Wakayama, Japan

Go Ashida

Department of Biology, University of Maryland, College Park, MD, USA

Victoria M. Bajo

Department of Physiology, Anatomy and Genetics, University of Oxford, Oxford, UK

Emili J. Balaguer-Ballester

Computational Neuroscience group, Central Institute for Mental Health (ZI), Ruprecht-Karls, Germany

Sylvie Baudoux

MRC Institute of Hearing Research, Nottingham, UK

Marion Beauvais

CNRS & Université Paris Descartes & École normale supérieure, Paris, France

Joshua Bernstein

Army Audiology and Speech Center, Walter Reed Army Medical Center, Washington, DC, USA

Leslie R. Bernstein

Departments of Neuroscience and Surgery (Otolaryngology),
University of Connecticut Health Center, Farmington, CT, USA

Rainer Beutelmann

Medical Physics, University of Oldenburg, Oldenburg, Germany

Jennifer Bizley

Department of Physiology, Anatomy and Genetics, University of Oxford,
Oxford, UK

Jonathan D. Boley

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

Thomas Brand

Medical Physics, University of Oldenburg, Oldenburg, Germany

Jeroen Breebaart

Philips Research Laboratories, Eindhoven, The Netherlands

Guy J. Brown

Department of Computer Science, University of Sheffield, Sheffield, UK

Ian C. Bruce

Department of Electrical & Computer Engineering, McMaster University,
West Hamilton, ON, Canada

Andrew Brughera

Department of Biomedical Engineering, Boston University, Boston, MA, USA

Andrew Byrne

Department of Psychology, University of Minnesota, Minneapolis, MN, USA

Robert P. Carlyon

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Catherine Carr

Department of Biology, University of Maryland, College Park, MD, USA

Orlando Castellano

Departamento de Biología Celular y Patología, Instituto de Neurociencias de
Castilla y León, Universidad de Salamanca, Salamanca, Spain

Nicholas R. Clark

MRC Institute of Hearing Research, University Park, Nottingham, UK

Martin Coath

Centre for Theoretical and Computational Neuroscience,
University of Plymouth, Devon, UK

Harry Steven Colburn

Department of Biomedical Engineering, Boston University, Boston, MA, USA

Ellen Covey

Department of Psychology, University of Washington, Seattle, WA, USA

John Francis Culling

School of Psychology, Cardiff University, Cardiff, UK

Rhodri Cusack

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Christopher J. Darwin

Department of Psychology, University of Sussex, Brighton, UK

Torsten Dau

Department of Electrical Engineering, Centre for Applied Hearing Research, Denmark

Stephen David

Institute for Systems Research, Electrical and Computer Engineering Department, University of Maryland, College Park, MD, USA

Matthew H. Davis

MRC Cognition & Brain Sciences Unit, Cambridge, UK

José Anchieta de Castro e Horta Júnior

Departamento de Anatomia, Instituto de Biociências, UNESP, Brazil

Bertrand Delgutte

Eaton-Peabody Laboratory, Massachusetts Eye & Ear Infirmary, Boston, MA, USA

Susan L. Denham

Centre for Theoretical and Computational Neuroscience, University of Plymouth, Plymouth, Devon, UK

Sasha Devore

Eaton-Peabody Laboratory, Massachusetts Eye & Ear Infirmary, Boston, MA, USA

Mathias Dietz

Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

Darren Edwards

MRC Institute of Hearing Research, University Park, Nottingham, UK

Mounya Elhilali

Department of Electrical and Computer Engineering, Johns Hopkins University, Baltimore, MD, USA

Stephan D. Ewert

Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

Robert Ferry

University of Essex, Colchester, UK

Suzanne Fitzpatrick

Department of Psychology, Lancaster University, Lancaster, UK

Jonathan Fritz

Institute for Systems Research, Electrical and Computer Engineering Department,
University of Maryland, College Park, MD, USA

Etienne Gaudrain

Centre for the Neural Basis of Hearing, University of Cambridge, Cambridge, UK

Oded Ghitza

Sensimetrics Corporation and Boston University, Malden, MA, USA

Hedwig E. Gockel

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Ricardo Gómez-Nieto

Departamento de Biología Celular y Patología, Instituto de Neurociencias de
Castilla y León, Universidad de Salamanca, Salamanca, Spain

Matthew Goupell

Acoustics Research Institute, Austrian Academy of Sciences, Vienna, Austria

Steven Greenberg

Silicon Speech, Santa Venetia, CA, USA

Benedikt Grothe

Biocenter, University of Munich, Germany

Kinga Gyimesi

Department of General Psychology, Institute for Psychology, Budapest, Hungary

Kenneth Hancock

Eaton-Peabody Laboratory, Massachusetts Eye & Ear Infirmary, Boston, MA, USA

Nicol S. Harper

UCL Ear Institute, London, UK

Phillipp Hehrmann

UCL Gatsby Computational Neuroscience Centre, London, UK

Antje Heinrich

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Michael G. Heinz

Department of Speech, Language, and Hearing Sciences, Purdue University,
West Lafayette, IN, USA

G.B. Henning

The Institute of Ophthalmology, London, UK

Javier M. Herrero-Turrión

Instituto de Neurociencias de Castilla y León, Universidad de Salamanca,
Salamanca, Spain

Arjan Hillebrand

Department of Clinical Neurophysiology, VU University Medical Center,
Amsterdam, The Netherlands

Volker Hohmann

Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

Stephen D. Holmes

Psychology, School of Life and Health Sciences, Aston University,
Birmingham, UK

Rasha A. Ibrahim

Department of Electrical & Computer Engineering, McMaster University,
West Hamilton, ON, Canada

Toshio Irino

Faculty of Systems Engineering, Wakayama University, Wakayama, Japan

Naoya Itatani

Animal Physiology and Behaviour Group, Institute for Biology and
Environmental Sciences, Oldenburg, Germany

Skyler Jennings

Department of Speech Language and Hearing Sciences, Purdue University,
West Lafayette, IN, USA

Peter Johannesen

Instituto de Neurociencias de Castilla y León, Universidad de Salamanca,
Salamanca, Spain

Ingrid Johnsrude

Department of Psychology, Queen's University, Kingston, ON, Canada

Philip X. Joris

Laboratory of Auditory Neurophysiology, Medical School, Leuven, Belgium

Tim Jürgens

Medical Physics, University of Oldenburg, Oldenburg, Germany

Katharina Kaiser

Biocenter, University of Munich, Munich, Germany

Sushrut Kale

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

Hideki Kawahara

Faculty of Systems Engineering, Wakayama University, Wakayama, Japan

Shunsuke Kidani

School of Information Science, Nomi Ishikawa, Japan

Andrew J. King

Department of Physiology, Anatomy and Genetics, University of Oxford, Oxford, UK

Martin Klein-Henning

Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

Astrid Klinge

Animal Physiology and Behaviour Group, Institute for Biology and Environmental Sciences, Oldenburg, Germany

Georg M. Klump

Animal Physiology and Behaviour Group, Institute for Biology and Environmental Sciences, Oldenburg, Germany

Armin Kohlrausch

Philips Research Laboratories, Eindhoven, The Netherlands

Kanthaiah Koka

Department of Physiology and Biophysics, University of Colorado Health Sciences Center, Aurora, CO, USA

Birger Kollmeier

University of Oldenburg, Medical Physics, Germany

Katrin Krumbholz

MRC Institute of Hearing Research, University Park, Nottingham, UK

Bernhard Laback

Acoustics Research Institute, Austrian Academy of Sciences, Vienna, Austria

Nicolas Le Goff

Technical University, Eindhoven, The Netherlands

Wendy Lecluyse

University of Essex, Colchester, UK

Christian Leibold

Biocenter, University of Munich, Munich, Germany

Feipeng Li

ECE Department, University of Illinois at Urbana-Champaign, Urbana, IL, USA

M^a Dolores Estilita López García

Departamento de Biología Celular y Patología, Instituto de Neurociencias de Castilla y León, Universidad de Salamanca, Salamanca, Spain

Enrique A. Lopez-Poveda

Instituto de Neurociencias de Castilla y León, Universidad de Salamanca, Salamanca, Spain

Helge Lüddemann

Medizinische Physik, Institut für Physik, Universität Oldenburg, Oldenburg, Germany

Andrei N. Lukashkin

School of Life Sciences, University of Sussex, Falmer, Brighton, UK

Victoria Lukashkina

School of Life Sciences, University of Sussex, Falmer, Brighton, UK

Bernd Lütkenhöner

Section of Experimental Audiology, Münster University Hospital, Münster, Germany

Ling Ma

Department of Bioengineering, University of Maryland, College Park, MD, USA

Katrina MacLeod

Department of Biology, University of Maryland, College Park, MD, USA

Julia K. Maier

UCL Ear Institute, London, UK

Piotr Majdak

Acoustics Research Institute, Austrian Academy of Sciences, Vienna, Austria

Simon J. Makin

Department of Psychology, The University of Reading, Reading, UK

Manuel S. Malmierca

Auditory Neurophysiology Unit, Institute for Neuroscience of Castilla y Leon, University of Salamanca, Spain

Torsten Marquardt

UCL Ear Institute, London, UK

Myles Mc Laughlin

Laboratory of Auditory Neurophysiology, K.U. Leuven, Belgium

David McAlpine

UCL Ear Institute, London, UK

Ray Meddis

University of Essex, Colchester, UK

Ralf M. Meyer

Medical Physics, University of Oldenburg, Oldenburg, Germany

Christophe Micheyl

Department of Psychology, University of Minnesota, Minneapolis, MN, USA

Jessica J.M. Monaghan

Centre for the Neural Basis of Hearing, University of Cambridge, Cambridge, UK

Paul Nelson

Department of Biomedical Engineering, Johns Hopkins University,
Baltimore, MD, USA

Fernando R. Nodal

Department of Physiology, Anatomy and Genetics, University of Oxford,
Oxford, UK

Daniel Oberfeld-Twistel

Department of Psychology, Johannes Gutenberg-Universität, Germany

Andrew Oxenham

Department of Psychology, University of Minnesota, Minneapolis, MN, USA

Alan Palmer

MRC Institute of Hearing Research, Nottingham, UK

Manasa R. Panda

University of Essex, Colchester, UK

Roy D. Patterson

Centre for the Neural Basis of Hearing, University of Cambridge, Cambridge, UK

Christian S. Pedersen

UCL Ear Institute, London, UK

Christopher J. Plack

Division of Human Communication and Deafness, University of Manchester,
Manchester, UK

Daniel Pressnitzer

CNRS & Université Paris Descartes & École normale supérieure, Paris, France

Friedemann Pulvermüller

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Andrew Raimond

Department of Psychology, The University of Reading, Reading, UK

Alberto Recio-Spinoso

Leiden University Medical Center, Leiden, The Netherlands

Guy P. Richardson

School of Life Sciences, University of Sussex, Brighton, UK

Helmut Riedel

Medizinische Physik, Institut für Physik, Universität Oldenburg,
Oldenburg, Germany

Brian Roberts

Psychology, School of Life and Health Sciences, Aston University,
Birmingham, UK

María E. Rubio

Department of Physiology and Neurobiology, University of Connecticut,
Farmington, CT, USA

Andre Rupp

Sektion Biomagnetismus, Abteilung Neurologie, Universität Heidelberg,
Heidelberg, Germany

Ian Russell

School of Life Sciences, University of Sussex, Brighton, UK

Maneesh Sahani

UCL Gatsby Computational Neuroscience Centre, London, UK

Jan Schnupp

Department of Physiology, Anatomy and Genetics, University of Oxford,
Oxford, UK

Andrew Schwartz

Eaton-Peabody Laboratory, Massachusetts Eye & Ear Infirmary,
Boston, MA, USA

Shihab A. Shamma

Institute for Systems Research, Electrical and Computer Engineering Department,
University of Maryland, College Park, MD, USA

Barbara Shinn-Cunningham

Department of Biomedical Engineering, Boston University, Boston, MA, USA

Yury Shtyrov

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Jonathan Z. Simon

Department of Electrical & Computer Engineering, University of Maryland,
College Park, MD, USA

Donal G. Sinex

Department of Psychology and Biology, Utah State University, Logan, UT, USA

Ida Siveke

Biocenter, University of Munich, Munich, Germany

Gábor Stefanics

Department of General Psychology, Institute for Psychology, Budapest, Hungary

Mark Stellmack

Department of Psychology, University of Minnesota, Minneapolis, MN, USA

Olaf Strelcyk

Centre for Applied Hearing Research, Department of Electrical Engineering,
Lyngby, Denmark

Elizabeth Strickland

Department of Speech Language and Hearing Sciences, Purdue University,
West Lafayette, IN, USA

Christian Sumner

MRC Institute of Hearing Research, Nottingham, UK

Jayaganesh Swaminathan

Department of Speech, Language, and Hearing Sciences, Purdue University,
West Lafayette, IN, USA

Christine M. Tan

University of Essex, Colchester, UK

Sarah K. Thompson

MRC Cognition & Brain Sciences Unit, Cambridge, UK

Simon J. Thorpe

Centre de Recherche Cerveau et Cognition (CERCO), CNRS, Toulouse, France

Daniel Tollin

Department of Physiology and Biophysics, University of Colorado Health
Sciences Center, Aurora, CO, USA

Constantine Trahiotis

Departments of Neuroscience and Surgery, University of Connecticut Health
Center, Farmington, CT, USA

Masashi Unoki

Advanced Institute of Science and Technology, Nomi Ishikawa, Japan

Stefan Uppenkamp

Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

Steven van de Par

Philips Research Laboratories, Eindhoven, The Netherlands

Marcel van der Heijden

Laboratory of Auditory Neurophysiology, Medical School, Leuven, Belgium

Neal Viemeister

Department of Psychology, University of Minnesota, Minneapolis, MN, USA

Kerry Walker

Department of Physiology, Anatomy and Genetics, University of Oxford,
Oxford, UK

Thomas C. Walters

Centre for the Neural Basis of Hearing, University of Cambridge, Cambridge, UK

Xiaoqin Wang

Laboratory of Auditory Neurophysiology, Department of Biomedical
Engineering, Baltimore, MD, USA

Anthony J. Watkins

Department of Psychology, The University of Reading, Reading, UK

Lutz Wiegrebe

Biocenter, University of Munich, Munich, Germany

Hagen Wierstorf

Medizinische Physik, Universität Oldenburg, Oldenburg, Germany

István Winkler

Department of General Psychology, Institute for Psychology, Budapest, Hungary

Daniel Winkowski

Institute for Systems Research, Electrical and Computer Engineering Department, University of Maryland, College Park, MD, USA

Caroline Witton

Wellcome Trust Laboratory for MEG Studies, Aston University, Birmingham, UK

Magdalena Wojtczak

Department of Psychology, University of Minnesota, Minneapolis, MN, USA

Jing Xia

Department of Cognitive and Neural Systems, Boston University, Boston, MA, USA

Juanjuan Xiang

Starkey Laboratories Inc., Eden, Prairie, MN, USA

Pingbo Yin

Institute for Systems Research, Electrical and Computer Engineering Department, University of Maryland, College Park, MD, USA

Eric Young

Department of Biomedical Engineering, Johns Hopkins University, Baltimore, MD, USA