

ACTA ACUSTICA

UNITED WITH

ACUSTICA

The Journal of the European Acoustics Association (EAA) · International Journal on Acoustics

Table of Contents

Preface

Recent Advances in Ambisonics and Spherical Acoustics V

Scientific Papers

Recent Advances in Ambisonics and Spherical Acoustics

F. M. Fazi, P. A. Nelson
Nonuniqueness of the Solution of the Sound Field Reproduction Problem with Boundary Pressure Control 1

D. Menzies
Sound Field Synthesis with Distributed Modal Constraints 15

J. Ahrens, S. Spors
Applying the Ambisonics Approach to Planar and Linear Distributions of Secondary Sources and Combinations Thereof 28

F. Zotter, H. Pomberger, M. Noisternig
Energy-Preserving Ambisonic Decoding 37

S. Favrot, J. M. Buchholz
Reproduction of Nearby Sound Sources Using Higher-Order Ambisonics with Practical Loudspeaker Arrays 48

G. Kearney, M. Gorzel, H. Rice, F. Boland
Distance Perception in Interactive Virtual Acoustic Environments using First and Higher Order Ambisonic Sound Fields 61

M. Pollow, K.-V. Nguyen, O. Warusfel, T. Carpentier, M. Müller-Trapet, M. Vorländer, M. Noisternig
Calculation of Head-Related Transfer Functions for Arbitrary Field Points Using Spherical Harmonics Decomposition 72

D. L. Alon, B. Rafaely
Spindle-Torus Sampling for an Efficient-Scanning Spherical Microphone Array 83

N. Epain, C. T. Jin
Independent Component Analysis Using Spherical Microphone Arrays 91

Underwater Sound

G. Bouchage, M. E. Zakharia
Assessment of the Sea Surface Roughness Effects on Geoacoustic Inversion Procedures 103

Building Acoustics

A. Dijckmans, G. Vermeir
A Wave Based Model to Predict the Niche Effect on Sound Transmission Loss of Single and Double Walls 111

ACTA ACUSTICA

UNITED WITH

ACUSTICA

The Journal of the European Acoustics Association (EAA) · International Journal on Acoustics

Computational and Numerical Acoustics

- F. Zhang, P. Habisreuther, M. Hettel, H. Bockhorn**
 Numerical Computation of Combustion Induced Noise Using Compressible LES and Hybrid CFD/CAA Methods **120**

Hearing, Audiology and Psychoacoustics

- B. Jiang, A. Liebl, P. Leistner, J. Yang**
 Sound Masking Performance of Time-Reversed Masker Processed from the Target Speech **135**
- B. Gygi, V. Shafiro**
 Spatial and Temporal Factors in a Multitalker Dual Listening Task **142**

Musical Acoustics

- P. Eveno, J.-P. Dalmont, R. Caussé, J. Gilbert**
 Wave Propagation and Radiation in a Horn: Comparisons Between Models and Measurements **158**

Auditory Quality of Systems

- J. Morel, C. Marquis-Favre, D. Dubois, M. Pierrette**
 Road Traffic in Urban Areas: A Perceptual and Cognitive Typology of Pass-By Noises **166**

Technical and Applied Papers

- N. D. Londhe, R. S. Anand**
 Numerical Parametric Study of Superharmonic Field Properties in Nonlinear Ultrasound Wave Propagation in Human Soft Tissues **179**
- L. Feng**
 Tone-Like Signal in the Wind-Induced Noise of Perforated Plates **188**

- European Acoustics Association News*** **195**

- Upcoming Events*** **195**

- Instructions for Authors*** **196**

- Editorial Board*** **197**