

ACTA ACUSTICA

UNITED WITH

ACUSTICA

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



Forum Acusticum 2011

Aalborg – Denmark

6th European Congress on Acoustics

27 June – 01 July 2011
Aalborg, Denmark

organised by



in cooperation with



on behalf of



Supported by Scandinavian Acoustical Societies

Table of Contents

Greetings from the Meeting Organizers	S 1
1. Committees and Organizing Institutions	S 2
1.1 Danish Acoustical Society (DAS).....	S 4
1.2 Nordic Acoustic Association	S 4
1.3 European Acoustics Association (EAA)	S 5
2. EAA Award 2011.....	S 10
3. Congress - Technical Program	S 15
3.1 Keynote Speeches - Abstracts.....	S 18
3.2 Paper and Poster Sessions - Abstracts	S 21
4. Author Index	S 153

ACTA ACUSTICA

UNITED WITH

ACUSTICA

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

Congress – Technical Program

Keynotes – Abstracts

What do we know in room acoustics? M. Vorländer.....	S 20
Modern Numerical Methods to Solve Real Life Acoustic Problems. O.v. Estorff.....	S 20
Pitch. A.d. Cheveigne.....	S 18
Reduction of Tyre/Road Noise – A complex challenge needing technological development. W. Kropp.....	S 19
Modeling and simulation of musical instruments. A. Chaigne.....	S 18
Laser Ultrasonics: Recent Achievements and Perspectives. V. Gusev.....	S 19
Adaptive Acoustic Sensing and Communication in Autonomous Ocean Sampling Networks. H. Schmidt.....	S 19
Advanced statistical analysis of perceptual audio evaluation data. P. Brockhoff.....	S 18

Paper and Poster Sessions – Abstracts

Bioacoustics.....	S 21
Communication Acoustics.....	S 23
Computational Acoustics.....	S 28
Computational Acoustics: Acoustical Boundary Elements - Theory, Numerics, and Practical Applications.....	S 31
Computational Acoustics: Time Domain Computational Acoustics.....	S 33
Electro Acoustics.....	S 35
Environmental Acoustics.....	S 39
Musical Acoustics.....	S 42
Musical Acoustics: Acoustic and Electrical Musical Instrument Modeling and Sound Synthesis.....	S 45
Musical Acoustics: Acoustics of Stringed Musical Instruments: Measurements, Modeling and Links with Instrument Building.....	S 46
Musical Acoustics: Measurements and Simulations of Musical Wind Instrument Behaviour.....	S 48
Musical Acoustics: Musical Performance and Instrumental Control in an Acoustical Perspective.....	S 53
Noise.....	S 55
Noise: Auditory Hazard Analysis.....	S 58
Noise: Road Transport Noise Abatement.....	S 60
Noise: Using Vegetation and Recycled Material in Noise Control... ..	S 65

Non-linear Acoustics.....	S 69
Physical Acoustics.....	S 71
Psychological and Physiological Acoustics.....	S 76
Psychological and Physiological Acoustics: Acoustic and Auditory Bases of Speech Production and Perception.....	S 82
Psychological and Physiological Acoustics: Hearing with Expectations - Auditory Perception and Judgment.....	S 84
Psychological and Physiological Acoustics: Oto-acoustic Emissions.....	S 88
Psychological and Physiological Acoustics: Sound in Multisensory Perception and Interaction.....	S 89
Room and Building Acoustics: Acoustics for Accessibility for All	S 91
Room and Building Acoustics: Building Acoustics.....	S 93
Room and Building Acoustics: Building Elements.....	S 96
Room and Building Acoustics: Characterization of Existing Rooms.....	S 97
Room and Building Acoustics: Computational Room Acoustics.....	S 100
Room and Building Acoustics: Design.....	S 105
Room and Building Acoustics: Effects of Office Noise on Work Performance.....	S 106
Room and Building Acoustics: Floor Vibration and Impact Sound Solutions.....	S 108
Room and Building Acoustics: Integrating and Harmonizing Sound Insulation Aspects in Sustainable Urban Housing Constructions.....	S 113
Room and Building Acoustics: Materials and Surface Dependent Parameters.....	S 116
Room and Building Acoustics: Measurements.....	S 118
Room and Building Acoustics: Room Acoustic Design of Open-plan Offices.....	S 119
Room and Building Acoustics: Room Simulation and Modeling.....	S 121
Soundscape: Application and Standardization.....	S 124
Soundscape: Cost Action TD0804 - Soundscape in European Cities and Landscape.....	S 126
Spatial Sound: Aural Assessment With Binaural Algorithms.....	S 128
Spatial Sound: Spatial Sound and Complex Listening Environments in Hearing Diagnostics.....	S 132
Spatial Sound: Spatial Sound Techniques and Applications.....	S 133
Structural Acoustics and Vibration: Measurements.....	S 139
Structural Acoustics and Vibration: Models.....	S 141
Ultrasound.....	S 146
Underwater Acoustics.....	S 150

Note to the Reader:

Due to journal publication schedules, the Programme of Abstracts as printed in this Supplement will have been updated by the time the Definitive Programme of the Forum Acusticum 2011 Congress is finalised. Please refer to the Forum Acusticum 2011 website http://www.fa2011.org/?Technical_Program for the final version of the Programme.