

# ACTA ACUSTICA

UNITED WITH

# ACUSTICA

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

## Table of Contents

### Preface

The Acoustics of the Ancient Theatres .....	V
---	---

### *The Acoustics of the Ancient Theatres*

### Scientific Papers

#### **J. Blauert**

Conceptual Aspects Regarding the Qualification of Spaces for Aural Performances .....	1
---	---

#### **A. Cocchi**

Theatre Design in Ancient Times: Science or Opportunity? .....	14
--	----

#### **J. H. Rindel**

Roman Theatres and Revival of Their Acoustics in the ERATO Project .....	21
--	----

#### **S. Psarras, P. Hatziantoniu, M. Kountouras, N.-A. Tatlas, J. N. Mourjopoulos, D. Skarlatos**

Measurements and Analysis of the Epidaurus Ancient Theatre Acoustics .....	30
--	----

#### **T. Lokki, A. Southern, S. Siltanen, L. Savioja**

Acoustics of Epidaurus – Studies With Room Acoustics Modelling Methods .....	40
--	----

#### **P. Economou, P. Charalampous**

The Significance of Sound Diffraction Effects in Simulating Acoustics in Ancient Theatres .....	48
---	----

#### **N. Prodi, A. Farnetani, P. Fausti, R. Pompoli**

On the Use of Ancient Open-Air Theatres for Modern Unamplified Performances: A Scale Model Approach .....	58
---	----

#### **S. Polychronopoulos, D. Kougias, P. Polykarpou, D. Skarlatos**

The Use of Resonators in Ancient Greek Theatres .....	64
---	----

#### **J.-C. Valière, B. Palazzo-Bertholon, J.-D. Polack, P. Carvalho**

Acoustic Pots in Ancient and Medieval Buildings: Literary Analysis of Ancient Texts and Comparison with Recent Observations in French Churches .....	70
--	----

#### **A. Tsilfidis, T. Vovolis, E. Georganti, J. Mourjopoulos**

Function and Acoustic Properties of Ancient Greek Theatre Masks .....	82
---	----

#### **L. Tronchin**

Francesco Milizia (1725-1798) and the Acoustics of his <i>Teatro Ideale</i> (1773) .....	91
--	----

#### **M. Lopez, S. Pauletto, G. Kearney**

The Application of Impulse Response Measurement Techniques to the Study of the Acoustics of <i>Stonegate</i> , a Performance Space Used in Medieval English Drama .....	98
---	----

#### **B. Fazenda, I. Drumm**

Recreating the Sound of Stonehenge .....	110
--	-----

# ACTA ACUSTICA

UNITED WITH

# ACUSTICA

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

## Technical and Applied Papers

**A. Farina, L. Tronchin**

3D Sound Characterisation in Theatres Employing Microphone Arrays ..... 118

## Scientific Papers

*Nonlinear Acoustics, Macrosonics*

**A. Merlen, P. Voinovich**

On the Sensitivity of Conjugate Acoustic Wave at Parametric Resonance Conditions to Small Wave Length Variations ..... 126

*Flow Acoustics*

**A. Pradera-Mallabiarrena, F. Jacobsen, C. Svendsen, A. Rivas, N. Gil-Negrete**

Practical Computational Aeroacoustics for Complex Confined Scattering Geometries in Low Mach Number Flows . . 130

**T. Geyer, E. Sarradj, C. Fritzsche**

Silent Owl Flight: Comparative Acoustic Wind Tunnel Measurements on Prepared Wings ..... 139

*Musical Acoustics*

**M. Miyamoto, Y. Ito, T. Iwasaki, T. Akamura, K. Takahashi, T. Takami, T. Kobayashi, A. Nishida, M. Aoyagi**

Numerical Study on Acoustic Oscillations of 2D and 3D Flue Organ Pipe Like Instruments with Compressible LES . 154

**European Acoustics Association News** ..... 172

**Upcoming Events** ..... 172

**Instructions for Authors** ..... 173

**Editorial Board** ..... 176