

Day 1 – December 7, 2005 AM

8.00-9.00	Registration
9.00-9.15	Welcome by Philippe Sardin, director of ENTPE
	Foreword by Franck Sgard, head of acoustic group of DGCB/ENTPE
<p>Theme</p> <p>Models of sound propagation in porous materials : towards an increasing complexity ?</p>	
9.15-10.10 (ref : 40)	<p><i>Plenary lecture</i></p> <p>Sound propagation in porous materials: a DRT temporal dispersion by Denis LAFARGE, LAUM, France</p>
10.10-10.35 (ref : 23)	<p>Acoustic Waves in Poroelastic Plate with Anisotropic Properties <u>P. KHURANA, Ph. Leclaire, L. Boeckx, W. Lauriks, A.K. Vashishth</u> Laboratorium voor Akoestiek en Thermische Fysica, Katholieke Universiteit Leuven, 3001 Heverlee, Belgium</p>
10.35-10.40	<p>Exhibitor S.C.S. Controlli e Sistemi Amadasi Giovanni</p>
10.40-10.45	<p>Exhibitor MICROFLOWN Arno Winkel</p>
10.45-11.05	<i>Break</i>
11.05-11.30 (ref : 50)	<p>Computation of the dynamic thermal permeability of acoustic foams <u>C. PERROT, R. Panneton, X. Olny</u> Groupe d'Acoustique, Université de Sherbrooke, 2500 bvd de l'université, J1K 2R1 Sherbrooke, Canada</p>
11.30-11.55 (ref : 36)	<p>Rayleigh scattering of P2 Waves <u>C. BOUTIN, M. Bazaille</u> Ecole Nationale des Travaux Publics de l'Etat, Laboratoire Géomatériaux - Département Génie Civil et Bâtiment - URA CNRS 1652, Rue M. Audin, 69518 Vaulx-en-Velin Cedex, France</p>
11.55-12.20 (ref : 48)	<p>Poroelastic models of the ground for predicting linear and nonlinear acoustic-to-seismic coupling <u>K. ATTENBOROUGH, P. Boulanger, Q. Qin</u> Department of Engineering, The University of Hull, Cottingham Road, HU6 7RX Hull, United Kingdom</p>
12.20-12.25 (ref : 33)	<p>Poster Wave number and variational formulations in acoustic transverse anisotropic porous media – (uu) Formulation - analytical part <u>O. DAZEL, J. Tran-van</u> Laboratoire d'Acoustique de l'Université du Maine UMR CNRS 6613, Av. Olivier Messiaen, 72 085 Le Mans Cedex 9, France</p>
12.25-12.30 (ref : 11)	<p>Poster 2D Mode Excitation in a Porous Slab Saturated with Air in the High Frequency Approximation <u>J.-P. GROBY, E. Ogam, A. Wirgin, Z.E.A. Fellah, W. Lauriks, J.-Y. Chapelon, C. Depollier, L. DeRyck, R. Gilbert, N. Sebaa, Y. Xu</u> Laboratoire de Mécanique et d'Acoustique, UPR 7051 du CNRS, 31 Chemin Joseph-Aiguier, 13402 Marseille cedex 20, France</p>

12.30 – 14.00 Lunch buffet

Theme	
Characterisation of acoustical parameters	
14.00-14.55 (ref : 39)	<i>Plenary lecture</i> State of the art by Prof. Raymond PANNETON, GAUS, Sherbrooke, Canada
14.55-15.20 (ref : 4)	Ultrasonic characterization of air-saturated porous materials <u>Z.E.A. FELLAH, E. Ogam, A. Wirgin, W. Lauriks, C. Depollier, M. Fellah</u> Laboratoire de Mécanique et d'Acoustique, (UPR 7051 du CNRS), 13402 Marseille cedex 20, France
15.20-15.25 (ref : 12)	Poster Characterization of the Acoustical Parameters in Macroscopically-Heterogeneous Lossless Porous Materials <u>L.DE RYCK, Z.E.A.Fellah, A.Wirgin, W.Lauriks, C.Depollier, M.Fellah</u> Laboratorium voor Akoestiek en Thermische Fysica, Katholieke Universiteit Leuven, Celestijnenlaan 200 D, 3001 Heverlee, Belgium
15.25-15.30 (ref : 20)	Poster Ultrasonic characterization of cancellous bone <u>N. SEBAA, Z.E.A. Fellah, W. Lauriks , C. Depollier , A. Wirgin , E. Ogam , R. Gilbert, Y. Xuh, S. Boonen, J. D0hooge, G. Vanderperre</u> Laboratorium voor Akoestiek en Thermische Fysica, KUL, 200D celestijnenlaan, 3001 Heverlee, Belgium
15.30-15.50	<i>Break</i>
15.50-16.15 (ref : 13)	Technology of Sound Projection Applied to the Characterisation of Acoustical Parameters of Poro-Elastic Materials <u>A. MOUSSATOV, B. Castagnede</u> Acoustics Laboratory (LAUM), UMR CNRS 6613, University of Maine, Av. Olivier Messiaen, 72085 Le Mans, France
16.15-16.40 (ref : 7)	Acoustic Properties of Partly Saturated Porous Soils <u>K. V. HOROSHENKOV, M. H. A. Mohamed, S. Adamidou</u> University of Bradford, School of Engineering, Design and Technology, University of Bradford, BD7 1DP Bradford, United Kingdom
16.40-17.05 (ref : 17)	Characterization of porous surfaces with a pole of the reflection coefficient <u>J.F. ALLARD, M. Henry</u> Laboratoire d'Acoustique de l'Université du Maine, UMR CNRS 6613, Avenue Olivier Messiaen, 72085 Le Mans, France
17.05-17.10 (ref : 24)	Poster An acoustical inverse measurement system to determine intrinsic parameters of porous samples <u>T. COURTOIS, T. Falk, C. Bertolini</u> RIETER Automotive, Schlosstalstrasse 43, P.O. Box, 8406 Winterthur, Switzerland
17.10-17.15 (ref : 42)	Poster Indirect acoustical characterization of a foam with two scales of porosity <u>L. JAOUEN, X. Olny</u> LASH/DGCB (URA CNRS 1652), Ecole Nationale des Travaux Publics de l'Etat, 2 rue Maurice Audin, 69 518 Vaulx-en-Velin Cedex, France
17.15-17.20 (ref : 49)	Poster Ultrasonic characterization of porous materials with high air flow resistivity <u>S. GRIFFITHS, C. Ayrault</u> Laboratoire d'Acoustique de l'Université du Maine, UMR CNRS 6613, Avenue Olivier Messiaen, 72085 Le Mans Cedex, France

Theme

Prediction tools (1) : how far have we got ?

9.00-9.55 (ref : 38)	<i>Plenary lecture</i> State of the art by Prof. Nouredine ATALLA, GAUS, Sherbrooke, Canada
9.55-10.20 (ref : 26)	Finite element modelling of multi-layered trim components; possibilities and difficulties <u>N.-E. HöRLIN, P. Göransson, R. Guastavino</u> Department of Aeronautical and Vehicle Engineering, Teknikringen 8, 10044 Stockholm, Sweden
10.20-10.50	<i>Break</i>
10.50-11.15 (ref : 30)	Example of meshing rules for finite element modelling of simple and double porosity materials <u>F. CASTEL</u> ENTPE/ LASH now at Renault, Renault SAS Technocentre, 78288 Guyancourt Cedex, France
11.15-11.40 (ref : 45)	Prediction and experimental validation of the sound field above a patchwork of absorbing materials <u>R. LANOYE, F. Sgard, W. Desmet, G. Vermeir, W. Lauriks</u> Laboratorium voor akoestiek en thermische fysica, Katholieke Universiteit Leuven Celestijnenlaan 200 D, 3001 Heverlee, Belgium
11.40-12.05 (ref : 31)	Characterization of uncertainties on parameters within poro-elastic media : numerical methods for prediction tools <u>C. HEINKELE, S. Pernot, F. Sgard, C.H. Lamarque</u> ENTPE, rue Maurice Audin, 69518 Vaulx-en-Velin, France

12.30 – 14.00 Lunch buffet

Theme	
Characterisation of elastic and damping parameters	
14.00-14.55 (ref : 14)	<p><i>Plenary lecture</i></p> <p>State of the art : Characterisation of porous acoustic materials by Prof. Walter LAURIKS, K.U. Leuven, Belgium</p>
14.55-15.20 (ref : 8)	<p>Recovery of the mechanical parameters of long bones from their vibroacoustic impulse response <u>E. OGAM, A. Wirgin, Z.E.A Fellah, J.-P Groby, W. Lauriks, J.-Y. Chapelon, C. Depollier., L. DeRyck, R. Gilbert, N. Sebaa, Y. Xu</u> Laboratoire de Mécanique et d'Acoustique, (UPR 7051 du CNRS), 13402 Marseille cedex 20, France</p>
15.20-15.25 (ref : 2)	<p>Poster A mathematical model for evaluation of osteoporosis <u>R. GILBERT, A. Wirgin, Y. Xu , S. Zhang</u> University of Delaware, Department of Mathematics, 19716 Newark, United States of America</p>
15.25-15.30 (ref : 3)	<p>Poster Acoustic Identification of a Poroelastic Cylinder <u>L. DERYCK, Z. Fellah, J.-P. Groby, E. Ogam, N. Sebaa, J.-Y. Chapelon, C. Depollier, R. Gilbert, T. Scotti, A. Wirgin, Y. Xu</u> Laboratorium voor Akoestiek en Thermische Fysica, Katholieke Universiteit Leuven, 3001 Heverlee, Belgium</p>
15.30-15.50	<p><i>Break</i></p>
15.50-16.15 (ref : 10)	<p>Measurements via Debye series expansion of the velocity and the attenuation of the compressional waves in a water – saturated porous plate obeying Biot's theory <u>F. BELHOCINE, S. Derible, H. Franklin</u> LAUE UMR 6068 Université du Havre, LAUE, IUT Caucriauville, Place Robert Schuman, 76610 Le Havre, France</p>
16.15-16.40 (ref : 27)	<p>Characterisation of Anisotropic Porous Foam Materials <u>R. GUASTAVINO, P. Göransson, N.-E. Hörlin</u> Department of Aeronautical and Vehicle Engineering, Teknikringen 8, 10044 Stockholm, Sweden</p>
16.40-17.05 (ref : 5)	<p>Characterisation of porous materials viscoelastic properties involving the vibroacoustical behaviour of coated panels <u>O. DOUTRES, N. Dauchez</u> LAUM - Laboratoire d'Acoustique de l'Université du Maine, Avenue O. Messiaen, 72085 Le Mans, France</p>

20.00 – Banquet at the panoramic restaurant « Arc en Ciel »

Theme

Prediction tools (2) : case studies

9.00-9.55 (ref : 41)	<i>Plenary lecture</i> Engineering feedback by Prof. Mohamed-Ali HAMDY, UTC, France
9.55-10.20 (ref : 46)	Poro-elastic modeling: review of current methods used in aircraft design <u>A. WESTON, M. Gmerek</u> Noise & Emissions Engineering, The boeing company, P.O. Box 3707 Seattle, United States of America
10.20-10.25 (ref : 32)	Poster The effect of an added porous layers on sound transmission <u>S. SCHNEIDER, P.-O. Mattei</u> CNRS/LMA Marseille, 31 chemin Joseph-Aiguier, 13402 Marseille cedex 20, France
10.25-10.50	<i>Break</i>
10.50-11.15 (ref : 21)	Measurement of liner acoustic impedance in a shear layer of a subsonic flow by Laser Doppler Velocimetry <u>M. LAVIEILLE, F. Simon, F. Micheli</u> Office National d'Etudes et de Recherches Aérospatiales (ONERA), 2 avenue Edouard Belin, BP4025, 31055 Toulouse cedex 4, France
11.15-11.40 (ref : 34)	Active reduction of vibroacoustic transmission using elasto-poroelastic sandwich panels and piezoelectric materials <u>T.G. ZIELINSKI, M.-A. Galland, M.N. Ichchou</u> LMFA, Centre Acoustique UMR CNRS 5509, Ecole Centrale de Lyon, 36 av. Guy de Collongue, 69134 Ecully Cedex, France
11.40-12.05 (ref : 15)	Modelisation of melamine wedges of an anechoic chamber using the Biot theory <u>S. SCHNEIDER, P. Herzog</u> CNRS/LMA Marseille, 31 chemin Joseph-Aiguier, 13402 Marseille cedex 20, France

12.30 – 14.00 Lunch buffet

Theme	
Innovative solutions for noise control	
14.00-14.55 (ref : 37)	<p><i>Plenary lecture</i></p> <p>Acoustical properties of multiscales porous materials by Dr. Xavier OLNy, LASH-ENTPE, France</p>
14.55-15.20 (ref : 47)	<p>Advanced heterogeneous materials for noise and vibration control <u>F.-X. BÉCOT, F. Sgard</u> ENTPE, rue Maurice Audin, 69518 Vaulx-en-Velin, France</p>
15.20-15.25 (ref : 16)	<p>Poster Boundary Element Energy Method for the prediction of machinery encapsulation <u>M. THIVANT, A. Cloix</u> VIBRATEC, 28, Chemin du petit Bois, 69131 ECULLY, France</p>
15.25-15.30 (ref : 28)	<p>Poster Hybrid absorption to reduce the noise transmitted by a plate coupled to a cavity : Determination of the optimal impedance <u>J.-B. DUPONT, M.-A. Galland</u> Centre Acoustique du LMFA, UMR CNRS 5509, Ecole Centrale de Lyon, 36 avenue Guy de Collonge, 69134 Ecully Cedex, France</p>
15.30-15.35 (ref : 6)	<p>Poster Controlled Extrusion of Porous Media for Acoustic Applications <u>A. KHAN, K. Horoshenkov, H. Benkreira</u> University of Bradford, School of Engineering, Design and Technology, University of Bradford, BD7 1DP Bradford, United Kingdom</p>
15.35-15.40 (ref : 25)	<p>Poster Development of an Acoustic Absorbent Material Using Scrap Tyres <u>G. BOCCACCIO, J.-C. Le Roux, N. Poulain</u> Centre de Transfert de Technologie du Mans, 20, rue Thalès de Milet, 72000 LE MANS, France</p>
15.40-16.00	<i>Break</i>
16.00-16.25 (ref : 19)	<p>Evaluation of the Performance in Wind Tunnel of Hybrid Active/Passive Absorbent Panels <u>B. MAZEAUD, M.-A. Galland</u> Centre Acoustique du LMFA, UMR CNRS 5509, Ecole Centrale de Lyon, 36 avenue Guy de Collonge, 69134 Ecully Cedex, France</p>
16.25-16.50 (ref : 43)	<p>Increased Absorption by Irregular Porous Walls <u>S. FÉLIX, M. Asch, M. Filoche, B. Sapoval</u> Laboratoire de Physique de la Matière Condensée (UMR CNRS 7643), Ecole Polytechnique, 91 128 Palaiseau Cedex, France</p>

Closing word and farewell