

Tuesday December 5th

17:00	18:00	Welcome of participants	
18:00	20:00		Visit of Le Mans circuit
20:00	21:00		Dinner

Wednesday December 6th

08:00	08:30	Welcome of participants	
08:30	09:00	Opening ceremony	

Session: Characterisation of Porous Materials

<b>09:00</b>	<b>09:45</b>	<b>Keynote Lecture</b>	Photoacoustic determination of mechanical properties at microstructure level	<u>CHRIST GLORIEUX</u> (KUL, Belgium)
09:45	10:05	Charac 1	26 - Laboratory and In Situ Sound Absorption Measurement under a Synthesized Diffuse Acoustic Field: a Case Study on Five Materials	<u>O. ROBIN</u> , C.K. AMEDIN, A. BERRY, N. ATALLA, O. DOUTRES, F. SGARD
10:05	10:25	Charac 2	17 - Vibration damping properties of porous materials	<u>L. ROULEAU</u> , A. GUINAULT, J.-F. DEU
10:25	10:55	<i>Coffee break</i>		
10:55	11:15	Charac 3	12 - Micro- to Macro-scale Investigations of Anisotropy and Local Boundary Stiffness Variations in Open-cell Lightweight Foams	<u>P. GORANSSON</u> , J. CUENCA, E. LUNDBERG, L. MANZARI
11:15	11:35	Charac 4	62 - SLaTCoW (Spatial Laplace Transform for COMplex Wavenumber recovery) method for frequency / complex wavenumber dispersion relation recovery	<u>A. GESLAIN</u> , L. SCHWAN, J.-P. GROBY, V. ROMERO-GARCIA, S. RAETZ, A. DUCLOS, N. BOECHLER
11:35	11:55	Charac 5	35 - Elastic characterization of a porous layer in a sandwich structure	<u>L. LEJ</u> , J.D. CHAZOT, N. DAUCHEZ
11:55	12:15	Charac 6	63 - Round Robin test on elastic properties of poro- and viscoelastic materials for vibro-acoustic applications	<u>P. BONFIGLIO</u> , et al.
12:15	13:30	<i>Lunch</i>		
<b>13:30</b>	<b>13:50</b>	<b>Poster</b>	<b>10(charac), 48(charac), 68(charac), 9(models)</b>	
13:50	14:10	Charac 7	60 - Characterization of poroelastic materials through interface scattering and propagation models	<u>S. BOURGUIGNON</u> , N. BOUHLEL, A. DUCLOS, J.P. GROBY
14:10	14:30	Charac 8	64 - Characterizing rigid frame porous materials with deterministic and statistical inversion	<u>M. NISKANEN</u> , J.P. GROBY, A. DUCLOS, O. DAZEL, J.C. LE ROUX, N. POULAIN, T. HUTTUNEN, T. LÄHIVAARA
14:30	14:50	Charac 9	39 - Efficient simulation of dispersion envelope of poro-elastic media	<u>J. RODENAS</u> , F. CHEVILLOTTE, F.-X. BÉCOT, L. JAOUEN
14:50	15:20	<i>Coffee break</i>		
<b>15:20</b>	<b>15:40</b>	<b>Poster</b>	<b>30(models), 32(models), 70(models), 22(materials)</b>	

Session: Flow in presence of porous materials

15:40	16:25	<b>Keynote Lecture</b>	Boundary conditions modeling acoustic linings in flow	<u>EDWARD BRAMBLEY</u> (Warwick University, UK)
16:25	16:45	Flow 1	28 - Instability over a Porous Line in a Duct with Flow	<u>Y. AURÉGAN</u>
16:45	17:05	Flow 2	41 - Analysis of the non-linear behavior of micro-perforated plates using lattice Boltzmann method	<u>F. CHEVILLOTTE</u> , P. MARCHNER, M. MARTINEZ, R. RONCEN, F. SIMON
17:05	17:25	Flow 3	53 - Transmission losses of a turbofan inlet duct lined with porous materials	<u>E. PERREY-DEBAIN</u> , C. CHAN, J.-M. VILLE, B. POIRIER
17:25	17:45	Flow 4	65 - Properties of bulk reacting absorbers subject to flow and temperature boundary layers	<u>S. BOIJ</u> , A. FARM, R. GLAV
17:45	18:05	Flow 5	66 - Acoustic propagation in a circular pipe with periodic inclusions	<u>J. GOLLIARD</u> , Y. AUREGAN
18:30	20:00	Visit of the Old City / Reception at the City hall		

Thursday December 7th

Session: Physical models

08:30	09:15	<b>Keynote Lecture</b>	Thermacoustics: an overview	<u>GAELE POIGNAND</u> (Le Mans Université, France)
09:15	09:35	<b>Poster</b>	<b>44(materials), 57(materials), 58(materials), 11(appli)</b>	
09:35	09:55	Models 1	47 - Advances in the microstructure and transport properties of random fibrous materials	<u>C. PERROT</u> , R. PANNETON, J. GUILLEMINOT, V. MONCHIET, P. LEROY, G. JACQUS, M. HE, H.-T. LUU
09:55	10:15	Models 2	29 - Reflection and transmission by a double porosity layer obeying Berryman-Wang theory	<u>F.Z. KACHKOUCH</u> , H. FRANKLIN, A. TINEL, A. ALEM, H. WANG
10:15	10:45	<i>Coffee break</i>		
10:45	11:05	<b>Poster</b>	<b>19(appli), 25(appli), 31(comput), 55(comput)</b>	
11:05	11:25	Models 3	21 - Acoustic Dissipation by Films: a Step Towards Liquid Foams and Membrane-Type Metamaterials Modelling	<u>C. GAULON</u> , J. PIERRE, F. ELIAS, V. LEROY, C. DEREÇ
11:25	11:45	Models 4	42 - Acoustic wave propagation in fractal porous material	<u>Z.E.A. FELLAH</u> , A. BERBICHE, M. FELLAH, E. OGAM, C. DEPOLLIER
11:45	12:05	Models 5	46 - New topics on the Nonlocal Maxwellian theory of sound propagation: "External Force - External Current" acoustic-electromagnetic analogy, and quasi-analytical validations of the action-response homogenization procedures.	N. NEMATI, <u>D. LAFARGE</u>
12:05	13:30	<i>Lunch</i>		

Session: Metamaterials / New materials

13:30	14:15	<b>Keynote Lecture</b>	Optimal Sound-Absorbing Structures	<u>PING SHENG</u> (The Hong Kong Univ. of Sci. & Tech.)
14:15	14:35	Materials 1	13 - Microstructures for lowering the frequency of the quarter wavelength resonance of a hard-backed rigid-porous layer	<u>K. ATTENBOROUGH</u>
14:35	14:55	Materials 2	15 - 3D printed membrane-type acoustic metamaterials for small- scale applications	<u>C. CASARINI</u> , B. TILLER, J. WINDMILL, J. JACKSON
14:55	15:15	Materials 3	34 - Influence of activation processes on the of activated carbon felts microstructure and impact on the acoustic performances	<u>H. KARPINSKI</u> , O. UMNOVA, R. VENEGAS CASTILLO, J. HARGREAVES, A. NAHIL, S. LEHMANN FERNANDEZ
15:15	15:35	Materials 4	40 - Straw-inspired Metamaterial for Sound Absorption	<u>W. HUANG</u> , L. SCHWAN, V. ROMERO GARCIA, J.-M. GÉNEVAUX, J.P. GROBY
15:35	16:05	<i>Coffee break</i>		
16:05	16:25	Materials 5	45 - Metaporous Layers for Broadband Sound Absorption using Multiple Slow Waves	<u>J.S. LEE</u> , J. YANG, Y.Y. KIM
16:25	16:45	Materials 6	49 - Acoustic performance of a bubble meta-screen	<u>G.S. SHARMA</u> , M. TOYODA, N. KESSISSOGLU
16:45	17:05	Materials 7	50 - Propagation of low frequency sound through a metaporous layer of subwavelength thickness: Homogenization with numerical validation	<u>L. SCHWAN</u> , J.P. GROBY, O. UMNOVA
17:05	17:25	Materials 8	37 - Perfect absorption in acoustic metamaterials based on open lossy resonant building blocks	<u>V. ROMERO GARCIA</u> , N. JIMÉNEZ, V. PAGNEUX, J.P. GROBY
17:25	17:45	Materials 9	56 - Perfect and broadband sound absorption based in rainbow trapping phenomena for transmission problems	<u>N. JIMÉNEZ</u> , V. ROMERO GARCIA, J.P. GROBY
19:00	23:30		Visit of Abbaye Royale de l'Epau and Gala Dinner	

Friday December 8th

Session: Industrial applications

08:45	09:30	<b>Keynote Lecture</b>	Guided waves computation with porous media	<u>BENOIT NENNIG</u> (Supmecca, France)
09:30	09:50	Applications 1	18 - Application and Simulation of Microperforated Panels in a complex Sound Field	<u>S. FLOSS</u> , M. KALTENBACHER
09:50	10:10	Applications 2	20 - Assessment of the Structure Borne Insertion Loss performance of interior vehicle treatments	<u>T. DELPERO</u> , R. D'AMICO, R. STELZER, T. COURTOIS
10:10	10:30	Applications 3	43 - Cross-section based Analysis of Porous Metamaterial lined Mufflers	<u>N. SHARMA</u> , O. UMNOVA, A. MOORHOUSE
10:30	10:50	<i>Coffee break</i>		
10:50	11:10	Applications 4	51 - Upgrading hybrid stiff insulators performance through tailored solid inclusions localization: the Polyfoam and Ecofelt solutions	<u>A. DUVAL</u> , G. CRIGNON, M. GORET, D. LEMAIRE
11:10	11:30	Applications 5	54 - Porous materials in consumer products, the Dyson approach	<u>I. PEREZ PABLOS</u>
11:30	11:50	Applications 6	67 - Numerical modelling of the acoustics of low density fibrous media having a distribution of fiber sizes	<u>T. HERDTLE</u> , Y. XUE, J. S. BOLTON
11:50	12:10	Applications 7	38 - Microstructure morphological and acoustical macro-behavior analysis of high density filled foam	<u>M.T. HOANG</u> , V. MARCEL, J.-F. RONDEAU, A. CURIEN, L. DEJAEGER
12:10	13:10	<i>Lunch</i>		

Session: Computational methods

13:10	13:55	<b>Keynote Lecture</b>	A sub-domain system approach based on symmetric variational coupling of Boundary and Finite Element Methods : application to virtual prototyping of trimmed vehicles	<u>MOHAMED-ALI HAMDJ</u> (UTC, ESI Group, France)
13:55	14:15	Computation 1	14 -The shifted cell operator technique applied to equivalent fluids models for the computation of dispersion diagrams of periodic porous	<u>D. MAGLIACANO</u> , M. OUISSE, A. KHELIF, S. DE ROSA, F. FRANCO
14:15	14:35	Computation 2	16 - Acoustic modeling of filters and counter-current exchangers using a double equivalent fluid homogenization approach	<u>G. LIELENS</u> , A. TALBOT
14:35	14:55	Computation 3	23 - Efficient simulation of vibro-acoustic problems with poro-elastic damping using a Matrix-free Model Order Reduction scheme	<u>S. JONCKHEERE</u> , O. ATAK, H. BÉRIOT, W. DESMET
14:55	15:15	<i>Coffee break</i>		
15:15	15:35	Computation 4	36 - Acoustic wave transmission conditions on perforated rigid, or elastic plates - homogenization and computing	<u>E. ROHAN</u> , V. LUKES
15:35	15:55	Computation 5	59 - Adaptive High-order FEM for the mixed {U,p} poro-elasticity equations	<u>H. BÉRIOT</u> , O. DAZEL, G. GABARD, E. DECKERS
15:55	16:15	Computation 6	33 - The link between the plane-wave absorption coefficient and the sound field due to a point source	<u>R. DRAGONETTI</u> , M. NAPOLITANO, R. ROMANO
16:15	16:35	Computation 7	61 - Fibrous Material Microstructure Design for Optimal Damping Performance	<u>J.S. BOLTON</u> , Y. XUE
16:35	16:55	<i>Closing Ceremony</i>		
19:00	23:30		Dinner at "Café Rossi"	

Poster session: Characterisation of Porous Materials

- Wed 6th Dec 13:30-13:50** 10 - Mechanical Characterisation of Isotransverse Acoustic Foams [G. YAN](#), X. GUO, B. BROUARD, S. SAHRAOUI
- Wed 6th Dec 13:30-13:50** 48 - Characterisation of inhomogeneous ducts and porous media and extrapolation to experimentally unavailable thermal conditions [J. CUENCA](#), L. DE RYCK, A. PERDIGON, T. LE SCOLAN
- Wed 6th Dec 13:30-13:50** 68 - Bayesian characterization of poroelastic materials saturated with heavy fluid [M. NISKANEN](#), A. DUCLOS, O. DAZEL, J-P. GROBY, T. HUTTUNEN, T. LÄHIVAARA

Poster session: Physical models

- Wed 6th Dec 13:30-13:50** 9 - Fractional derivatives model to predict high frequency moduli of acoustic foams [X. GUO](#), G. YAN, L. BENYAHIA, S. SAHRAOUI
- Wed 6th Dec 15:20-15:40** 30 - Active Membrane Noise Absorber in Duct Based on Fuzzy Model Control Strategy [R. MOEZZI](#)
- Wed 6th Dec 15:20-15:40** 32 - Johnson-Champoux-Allard model in thermoacoustics [R. DRAGONETTI](#), M. NAPOLITANO, R. ROMANO
- Wed 6th Dec 15:20-15:40** 70 - Tunable isolation band gaps in one-dimensional active piezoelectric sonic crystals [Q. ZHANG](#), O. UMNNOVA, Y. LAN

Poster session: Metamaterials / New materials

- Wed 6th Dec 15:20-15:40** 22 - Acoustical and thermal joint approach for optimization of vegetal wools used in buildings [C. PIEGAY](#), P. GLÉ, E. GOURDON, E. GOURLAY, S. MARCEAU
- Wed 7th Dec 09:15-09:40** 44 - Evaluating Efficiency of SoundProof Paint Using Microporous Pigments [A. SHIMPI](#), A. SHIMPI
- Wed 7th Dec 09:15-09:40** 57 - Interaction of high amplitude waves with acoustic metamaterials [D. BROOKE](#)
- Wed 7th Dec 09:15-09:40** 58 - On the conditions for perfect absorption of sound by rigidly-backed layers of porous materials [N. JIMENEZ](#), V. ROMERO GARCIA, J-P. GROBY

Session: Industrial applications

- Wed 7th Dec 09:15-09:40** 11 - Development of an efficient capture and amplification system of sound waves [K. GADONNA](#), Z. ZHAO, B. WILLIATTE, A. SENOUCI
- Wed 7th Dec 10:50-11:10** 19 - Nanofibrous electrospun membranes for acoustic applications [A. HURREL](#), K. HOROSHENKOV, M. PELEGRINIS
- Wed 7th Dec 10:50-11:10** 25 - Experimental research of acoustic louver sound insulation [T. ASTRAUSKAS](#), T. VILNISKIS, O. KHRYSOSLAVENKO, T. JANUSEVICIUS, R. GRUBLIAUSKAS

Session: Computational methods

- Wed 7th Dec 10:50-11:10** 31 - Modelling of poroelastic media with localised mass inclusions T. ZIELINSKI, L. JANKOWSKI, [K. OPIELA](#), E. DECKERS
- Wed 7th Dec 10:50-11:10** 55 - Acoustic response of anisotropic multilayered structures: sub-layering of the anisotropic poroelastic core and influence of the material natural axis orientation. [J. P. PARRA MARTINEZ](#), J. CUENCA, P. GORANSSON, O. DAZEL