

Symposium on the Acoustics of Poro-Elastic Materials

Sorrento
SAPEM' 23
常熟

Novembre 7-10, 2023

Grand Hotel Europa Palace - Sorrento

*Conference delegates will be able to attend at either site at their convenience.
The conference sessions at both sites will be timed so that delegates
at both locations can participate simultaneously.*

Sorrento, Italy
Università degli Studi
di Napoli Federico II



常熟

Acoustic Valley Institute,
Changshu, China



TUESDAY, NOV. 7, 2023:

ET: Indiana CEST: Italy CST: China

presentation in  Italy or  China

02:00→02:15 08:00→08:15 15:00→15:15 Welcome of participants

02:15→02:30 08:15→08:30 15:15→15:30 Opening ceremony

02:30→03:10 08:30→09:10 15:30→16:10 Fabien Chevillotte  From the micro-structure to condensed meta-material models

03:10→03:30 09:10→09:30 16:10→16:30 Snow Yan et al.  Enhancing the Acoustic Performance of Sound-Absorbing Materials through Surface Coating Modification

03:30→03:50 09:30→09:50 16:30→16:50 Weihan Shen et al.  Vibration and acoustic behavior investigation of millimeter-sized porous mesh samples

ET: Indiana CEST: Italy CST: China

presentation in  Italy or  China

03:50→04:10 09:50→10:10 16:50→17:10 Alexandre Wilkinson et al.  Nonlinear and time-dependent behavior of compressed melamine foam: application to pyramidal asperities in a surface roughness model

04:10→04:30	10:10→10:30	17:10→17:30	Fabien Marchetti et al.	IT On the use of an additional parameter for the characterization and the condensation of heterogeneous or non-symmetric multilayered materials
04:30→05:00	10:30→11:00	17:30→18:00	Coffee break	
05:00→05:40	11:00→11:40	18:00→18:40	Li Cheng	CH Micro-perforated Boundary Modulated Slow Waves for Sound Absorption in a Sonic Black Hole Structure
05:40→06:00	11:40→12:00	18:40→19:00	Tongyang Shi et al.	CH Acoustic Modeling of Granular Material and its Combination with a Flexible Perforated Membrane
06:00→06:20	12:00→12:20	19:00→19:20	Tongyang Shi et al.	CH Granular Activated Carbon Sound Absorption Calculation with Measured Particle Parameters
06:20→06:40	12:20→12:40	19:20→19:40	Hongjia Zhang	CH AI-Based Design of Acoustic Metamaterials
ET: Indiana	CEST: Italy	CST: China	presentation in ITaIy or CHina	

06:40→07:00	12:40→13:00	19:40→20:00	YuXiang Cheng et al.	CH Analysis and optimization of sound absorption performance of porous materials with airflow resistivity gradient structure
07:00→07:20	13:00→13:20	20:00→20:20	Xinzhong Xiong et al.	CH Experimental Investigation of a simple Meta-Structure's sound absorption installed in different impedance tubes
	13:20→14:30	20:20→22:30	lunch or dinner	
	14:30→18:00	Italy: afternoon activities		

WEDNESDAY, NOV. 8, 2023:

09:00→15:00 China: morning activities

CH Multi-Functional Porous Materials:
Characterization, Modeling and Potential in
System-Level Noise Control

02:30→03:10 08:30→09:10 15:30→16:10 Yutong Xue

CH Acoustical Properties of Anisotropic
Spinodoid Structures

03:10→03:30 09:10→09:30 16:10→16:30 Yutong Xue et al.

IT Towards a control of acoustic energy
conversion in structured porous materials

03:30→03:50 09:30→09:50 16:30→16:50 Raffaele
Dragonetti et al.

IT Characterization of pressure-dependent
sound absorption in perforated rigid-frame
porous materials

03:50→04:10 09:50→10:10 16:50→17:10 Theo Cavalieri et
al.

IT Experimental study on the effect of
microgeometry of Kelvin-Cell-based porous
structures on sound insulation performance

04:10→04:30 10:10→10:30 17:10→17:30 Zenong Cai et al.

04:30→05:00 10:30→11:00 17:30→18:00 Coffee break

05:00→05:40 11:00→11:40 18:00→18:40 Rui Cao

CH Recent advances in computational and statistical methods

05:40→06:00 11:40→12:00 18:40→19:00 Yinshan Cai et al.

CH Stable model order reduction of vibro-acoustic finite element models with poroelastic materials

06:00→06:20 12:00→12:20 19:00→19:20 Zhao Jing

CH Study of finite-difference time-domain analysis on sound fields with porous materials

06:20→06:40 12:20→12:40 19:20→19:40 Cong Truc Nguyen et al.

IT Effect of Pore Size Polydispersity on Acoustic Properties of High-Porosity Solid Foams

06:40→07:00 12:40→13:00 19:40→20:00 María Mónica Ballesteros Villarreal et al.

IT Effects of anisotropic parameters on the acoustical behavior of porous materials with Biot's model through the finite element method

IT A recursive method to evaluate the scattering properties of grating stacks

07:00→07:20 13:00→13:20 20:00→20:20 Olivier Dazel et al.

13:00→14:30 20:00→22:30 lunch or dinner

14:30→18:00

Italy: Afternoon activities

THURSDAY, NOV. 9, 2023:

09:00→15:00 China: morning activities

CH Application of Lightweight Acoustic Materials and Structures in Rail Vehicles

02:00→02:40 08:00→08:40 15:00→15:40 Dengke Li

CH Experimental study of granular activated carbon stacks' level- and time-dependent acoustical behavior

02:40→03:00 08:40→09:00 15:40→16:00 Guochenhao Song, Stuart Bolton et al.



03:00→03:20	09:00→09:20	16:00→16:20	Peter Goransson et al.	IT Optimising low-frequency sound absorption in anisotropic multilayered poroelastic media using analytical microstructure modelling
03:20→03:40	09:20→09:40	16:20→16:40	Jean-Philippe Groby et al.	IT Willis coupling in one-dimensional poroelastic laminates
03:40→04:10	09:40→10:10	16:40→17:10	Coffee break	
04:10→04:50	10:10→10:50	17:10→17:50	Philippe Glé	IT Bio and geobased materials
04:50→05:10	10:50→11:10	17:50→18:10	Jacques Cuenca et al.	IT Statistical characterisation of porous media from sound absorption and ultrasound transmission measurements
05:10→05:30	11:10→11:30	18:10→18:30	Tapio Lokki et al.	IT Sound Speed Variations in Close Proximity to Porous Absorbers
05:30→05:50	11:30→11:50	18:30→18:50	Melanie Nolan et al.	IT Acoustic characterization of anisotropic porous materials



05:50→06:10 11:50→12:10 18:50→19:10 Preparation for gala lunch or dinner
12:10→14:30 19:10→22:30 Lunch or Dinner
14:30→18:00 Italy: Lab tour, see <https://www.cesma.unina.it>

FRIDAY, NOV. 10, 2023:

China: Open discussion about topics of next edition, collaboration
09:00→15:30 opportunities, private meetings

02:30→03:10 08:30→09:10 15:30→16:10 Mathieu Gaborit & IT 3D printing poroelastic media: features,
Tomasz Zielinski artifacts and the bigger picture

03:10→03:30 09:10→09:30 16:10→16:30 Huina Mao et al. IT 3D Auxetic Lattice Metamaterials From
Distorted Kelvin Cells



03:30→03:50	09:30→09:50	16:30→16:50	Haesang Yang et al.	IT Optimized configuration of multi-layered polyurethane foams in a dissipative silencer for broadband noise reduction
03:50→04:10	09:50→10:10	16:50→17:10	Mathieu Maréchal et al.	IT Dispersion relations of guided acoustic waves in poroelastic-based multilayer structures
04:10→04:30	10:10→10:30	17:10→17:30	Gino Iannace et al.	IT Experimental methods to evaluate the effective acoustic performance of screen made in metamaterials
04:30→05:00	10:30→11:00	17:30→18:00	Coffee break	
05:00→05:20	11:00→11:20	18:00→18:20	Fulbert Mbailassem et al.	IT Aeroacoustic modelling of rotating propeller interaction with porous treatments using LBM simulations
05:20→05:40	11:20→11:40	18:20→18:40	Franck Sgard et al.	IT Sound Absorption Coefficient of Extended-Reaction Porous Materials under Monopole Excitation: A Cautionary Examination



05:40→06:00	11:40→12:00	18:40→19:00	Maria Miranda Vuin et al.	IT Strain wave propagation through felt
06:00→06:20	12:00→12:20	19:00→19:20	Dmitri Kartofelev et al.	IT On pulse propagation in porous visco-elastic felt-like material
06:20→06:40	12:20→12:40	19:20→19:40	Quang Vu Tran et al.	IT Identification of microstructural descriptors characterizing the macro-behavior of polydisperse random fibrous media
12:40→14:10			19:40→23:00	Closing lunch or dinner (at the charge of each participant)
08:10→11:40	14:10→17:40	Italy & remote: Open discussion about topics of next edition, collaboration opportunities, private meetings		

POSTERS

Francesco Pompoli et al.	IT Sustainable Materials of Marine Origin: Experimental Investigation on Sound-Absorbing Properties and Possible Applications
Janis Heldmann et al.	IT Modelling of hierarchical pore structures in freeze-dried pectin cryogels
François-Xavier Bécot et al.	IT Acoustic Porous Materials, a brief history, edit 2023

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