

Science and technology for a quiet Europe

Programme book



@euronoise2015



Welcome to EURONOISE 2015

Dear Madam/Sir,

The Belgian Acoustical Association (ABAV) and Acoustical Society of the Netherlands (NAG) are proud to present Euronoise 2015, the 10th European Congress and Exposition on Noise Control Engineering, which they organize on behalf of the European Acoustics Association (EAA). Euronoise 2015 is held at the heart of Europe where the first treaties leading to the creation of the European Union were signed. Acousticians and noise experts from all over Europe (and the world) are gathering for the event on noise control and soundscape.

The Belgian Acoustical Association (ABAV) was founded in 1966 in order to promote and advance the science and practice of acoustics and to facilitate the exchange of information in the field. The Acoustical Society of the Netherlands (het Nederlands Akoestisch Genootschap (NAG)), was established in 1934. The founders envisaged a broad organization that, besides encouraging the development of a scientific approach to acoustics, would be occupied with acoustic consultancy and measurements and could also function as an anti-noise lobby. A couple of years ago, ABAV and NAG joined forces to organize Euronoise 2015 and for a reason. Things have changed a lot since both associations were founded. Noise in Europe has increased tremendously, mainly because of the large growth in traffic but also because population growth implies that more and more people are exposed to these higher noise levels. Now people realize that this increased exposure may cause health problems and affect quality of life and should urgently be addressed. And this is what we do in this conference. Whether you are a scientist, work for a governmental agency, are a consultant or expert, manufacture silent products or you are just a person interested in the reduction of noise, set your mind to work to develop the **science and technology for a quiet Europe**.

We warmly welcome you to the conference and hope you enjoy the presentations, the receptions, the exhibition, the posters, the keynote lectures, your discussions during the coffee breaks, the young acousticians' event, the congress diner, our host city Maastricht, etc. We sincerely hope the conference will inspire you in your efforts to reduce noise and maybe you come up with new ideas citizens need it!

For the organizing committee,
Dick Botteldooren & Ysbrand Wijnant, general Chairs

PROGRAM

Sunday

- 16:00 – 20:00 hrs Registration- / information desk (Foyer)
- 10:00 – 18:00 hrs EAA General Assembly (0.1. London, by invitation only)
- 18:00 – 21:00 hrs Chair person's / EAA / ICA dinner (at the Petit Bonheur, by invitation only)

Monday

- 07:30 – 20:00 hrs Registration- / information desk (Foyer)
- 08:00 – 20:00 hrs Exhibition open (Foyer)
- 09:00 – 09:40 hrs Opening ceremony (Auditorium 2)
- 09:40 – 10:30 hrs Keynote by Prof. dr. Karin Bijsterveld (Auditorium 2)
- 10:30 – 11:00 hrs Coffee break (at the Exhibition area)
- 11:00 – 18:00 hrs ICA board meeting (0.1 London, by invitation only)
- 11:00 – 12:40 hrs Parallel sessions
- 12:40 – 14:00 hrs Lunch break
- 12:40 – 13:40 hrs EAA TC Noise meeting (0.3 Kopenhagen, by invitation only)
- 13:50 – 14:40 hrs Keynote by Prof. dr. Wim Desmet (Auditorium 2)
- 14:40 – 20:00 hrs Young acoustics activity (Lobby)
- 18:00 – 19:00 hrs Young acousticians activity (0.8 Rome)
- 14:40 – 18:40 hrs Parallel sessions (with various coffee breaks at the Exhibition area)
- 18:40 – 20:00 hrs Welcome reception at the Exhibition area (with kind support of the city of Maastricht)

Side event:

Soundwalk by Trond Maag (16:00 hrs and 18:00 hrs), information and subscribe at registration and information desk

Tuesday

- 08:00 – 18:00 hrs Registration- / information desk and Exhibition (Foyer)
- 08:40 – 12:00 hrs Parallel sessions (with various coffee breaks at the Exhibition area)
- 09:40 – 12:00 hrs Workshop: European noise policy: where do we go? (supported by European Commission DG environment) (Auditorium 2)
- 12:00 – 12:50 hrs Keynote by Prof. dr. Steven van de Par (Auditorium 2)
- 12:50 – 13:40 hrs Lunch break
- 12:40 – 13:40 hrs EAA - TC Room and building acoustics (0.1 London)
- 13:40 – 18:20 hrs Parallel sessions (with various coffee breaks at the Exhibition area)
- 14:00 – 18:00 hrs Posters (Lobby)
- 17:40 – 18:30 hrs ABAV General Assembly (0.8 Rome, by invitation only)
- 19:30 – 23:00 hrs Congress dinner (meet at the embarkation point, see map of Maastricht in this book)

Wednesday

- 08:00 – 19:00 hrs Registration- / information desk and Exhibition (Foyer)
- 08:40 – 12:00 hrs Parallel sessions (with various coffee breaks at the Exhibition area)
- 12:00 – 12:50 hrs Keynote by Prof. dr. Jens Holger Rindel (Auditorium 2)
- 12:50 – 13:40 hrs Lunch break
- 13:40 – 17:20 hrs Parallel sessions (with various coffee breaks at the Exhibition area)
- 14:00 - 16:00 hrs Tutorials: Thermoacoustic and Aeroacoustic Nonlinearities in Green combustors with Orifice structures (0.4 Brussels)
- 17:20 – 18:00 hrs Closing and best paper awards (Auditorium 2)
- 18:00 – 19:00 hrs Farewell drink at the Exhibition (Foyer)

Monday 1st of June

Time	8:00	9:00	10:00	11:00	12:00	13:00																
Time	8:00	8:20	8:40	9:00	9:20	9:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40	13:00						
Location																						
Foyer	Registration desk open																					
Auditorium			Opening		Keynote 1						Acoustical aspects of timber struc											
0.1 London											ICA meeting											
0.2 Berlin											Noise Barriers											
0.3 Copenhagen											Techniques for virtual acou											
0.4 Brussels											Non auditory health effects of noise											
0.6 Madrid											Wind turbine noise: Human impac											
0.7 Lisbon											Time domain modelling											
0.8 Rome											Standardization, classifica											
0.9 Athens											Room acoustic measurement anc											
Lobby																						
		14:00	15:00	16:00	17:00	18:00	19:00	20:00														
Location	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00	19:20	19:40	20:00	20:20
Foyer	Rec																					
Auditorium			Keynote 2		Structural acoustics		Airborne and Impact sound transmission - measureme															
0.1 London																						
0.2 Berlin					Noise Barriers (cont)		Computational acoustics for offshore pile															
0.3 Copenhagen					Noise Mapping (incl. CNOSSOS/EU/Chir				Noise Mapping (incl. CNO													
0.4 Brussels					Non auditory health effects of noise				Annoyance & health effects of vibration & combi													
0.6 Madrid					Airport noise and its management				Airport noise		Noise control at power											
0.7 Lisbon					Computational acoustics / general				How the Dutch handle highway nc													
0.8 Rome					Local noise policies				Local noise policies (cont.)													
0.9 Athens					Room acoustic measurem				Room acoustic measurement and predictions (c													
Lobby	YAN activity																					

Tuesday 2nd of June

Time	8:00	8:20	8:40	9:00	9:20	9:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40
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Location

Auditorium	Auditory and Multi							Workshop: EU policy				Keynote 3			
0.1 London	Sound insulation of lightweight structure							Sound insulation of							
0.2 Berlin	Tyre/road noise modelling							Tyre/road noi							
0.3 Copenhagen	Auralisation of urban sou							Auralisation of urban				Traffic strateg			
0.4 Brussels	Health related quality of life and noise							Health related qualiti							
0.6 Madrid	Industrial noise control							Industrial noise control (cor							
0.7 Lisbon	Structured materials and metamaterials							Structured materials							
0.8 Rome	Microphone arrays and s							Microphone arrays and sou							
0.9 Athens	Acoustics in schools														
Lobby	Posters														

	13:00	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20
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Location

Auditorium	Excitation of building elements by structure							Excitation of building elements by structure										
0.1 London	Railway vibration and ground-borne noise							High speed train noise (Europe/China exch										
0.2 Berlin	Solutions for lower tyre/road noise							Solutions for lower tyre/road noise (cont.)										
0.3 Copenhagen	Recreational noise			Urban sound planning				Urban sound planning (cont.)										
0.4 Brussels	Sleep and noise							Annoyance effects due to noise sources										
0.6 Madrid	Construction i			Soundscape theory				Soundscape theory (cont.)										
0.7 Lisbon	Numerical methods for sound absor							Numerical methods fr				Experimental Methods for porous m						
0.8 Rome	Underwater Noise, Imaging and Communication											Designing outdoor ground fo				ABAV		
0.9 Athens	Open plan offices									Sound exposure of m			Universal design and acoust					
Lobby																		

Wednesday 3rd of June

	8:00		9:00		10:00		11:00		12:00						
Time	8:00	8:20	8:40	9:00	9:20	9:40	10:00	10:20	10:40	11:00	11:20	11:40	12:00	12:20	12:40
Location															
Auditorium	Acoustic regulations and				Acoustic regulations and classifica				Keynote 4						
0.1 London	Railway noise: sources,				Railway noise: sources, exterior no										
0.2 Berlin	Tyre/road noise measurements,				Tyre/road noise measurem										
0.3 Copenhagen	Fans, ducts and mufflers				Fans, ducts and mu										
0.4 Brussels	Hearing protectors - new developments														
0.6 Madrid	Analysis and Modelling of Psych				The effects of natural scen										
0.7 Lisbon	Active noise control				Vehicle Sound Quality										
0.8 Rome	Uncertainty of me		Sound sensor netwo		Sound sensor netwo										
0.9 Athens	Room in room acoustics				Sonic Crystal Acoustic Barriers										
Lobby															

	13:00.		14:00		15:00		16:00		17:00		18:00		19:00								
Time	13:00	13:20	13:40	14:00	14:20	14:40	15:00	15:20	15:40	16:00	16:20	16:40	17:00	17:20	17:40	18:00	18:20	18:40	19:00	19:20	
Location																					
Auditorium	Airborne and Impact sound transmis				Airborne and Impact sound t				Closing ceremony & Farewell drinks												
0.1 London	Railway noise: sources, exterior noi				Developments in standards and poli																
0.2 Berlin	Perception and Assessment				Perception and Asses																
0.3 Copenhagen	Fans, ducts and mufflers (co				Fans, ducts and muff																
0.4 Brussels	Workshop: TANGO																				
0.6 Madrid	Soundscape case studies				Soundscape t																
0.7 Lisbon	Acoustic material design process: From mic																				
0.8 Rome	Sound sensor netwo		European noise polic		European noise policies (cor																
0.9 Athens	Sensitivity of I		Methods to evaluate and mit		Methods to evaluate																
Lobby																					

Instructions for oral presentations:

- No presentation templates are required. However please use the Euronoise2015 logo available at the website (euronoise2015.eu)
- Your presentation has to be uploaded at least 2 hours before the start of your session in **Speaker Room 1.3**. Please make your presentation available for uploading to the conference computers as .ppt or .pps on a memory stick.
- Please label your presentation as: room_day_hour_name so it is easy to find your presentation on the conference computers
Example: - Auditorium2_Wednesday_1420_botteldoorn
 - Lisbon_Monday_0800_wijnant
- The presentation will be available on the conference computer in your session room
- The session chair or yourself has to start the presentation
- Presentation time is 15 min. There will be a notification when the 15 min. has passed.
- Discussion time is 3 min. There will be a notification when the 3 min. has passed.
- There is a 2 min. interval to change rooms.

Instructions for posters

- The size of the poster is DIN A0 (119 x 84 cm) portrait.
- No poster templates are required. However, please use the Euronoise2015 logo available at the website (euronoise2015.eu).
- Posters are mounted with pins (available on site)
- Posters will remain on display at the lobby area on floor 0 on Tuesday, from 9:00 till 18:00. Presenters are expected to be present at their poster at the time slot indicated in the program.

GOLD Sponsor



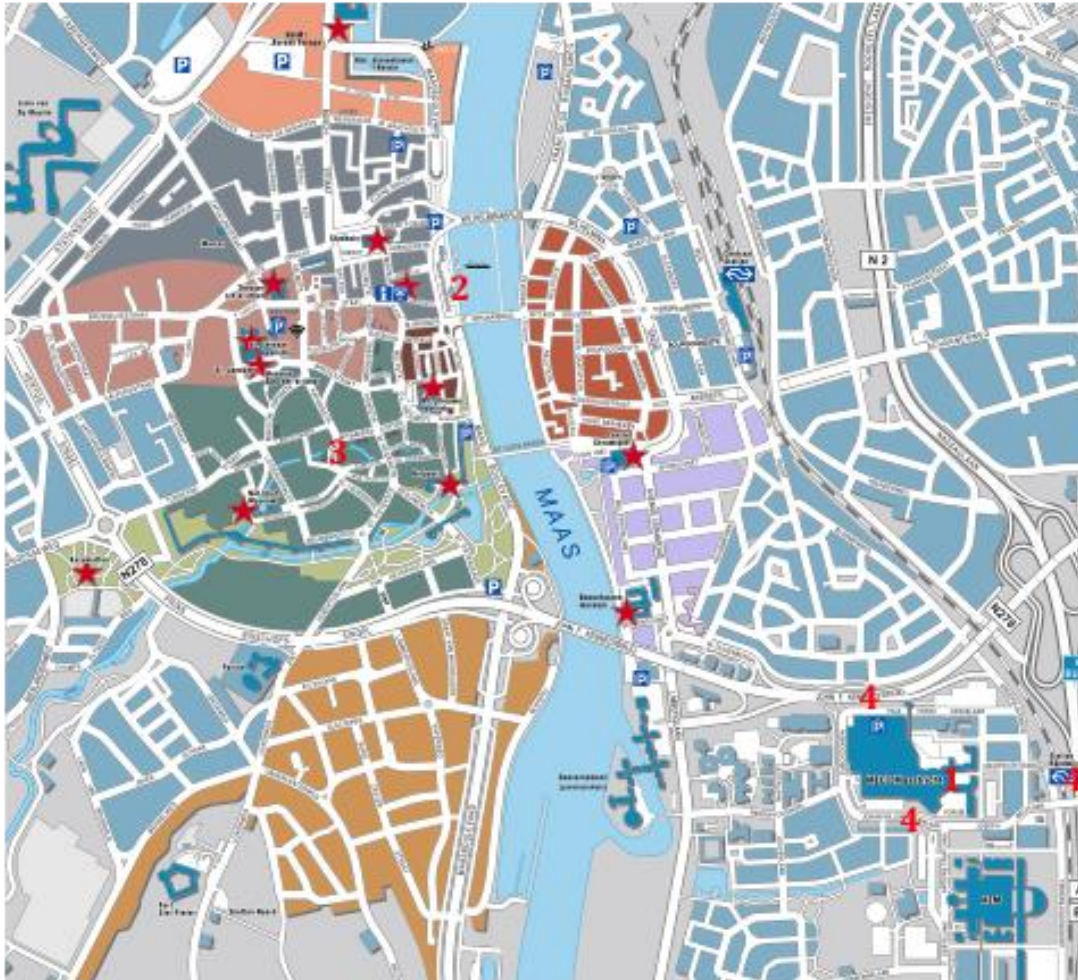
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City map of Maastricht



wijken / districts:

 Vrijthof	 Stokstraatkwartier	 Wyck
 Markt	 Jekerkwartier	 Céramique

legenda / legend:

 Belvédère	 park / parc	 free Wifi
 Sint Pieter	 highlights	 Vrijthof

1. Congress centre MECC
2. Departure point congress dinner, Stipthout, Maaspromenade 58 (Tuesday June 2, present at 19.30 hrs, only for registered people)
3. Restaurant for the Sunday (May 31) evening dinner, Petit Bonheur, Kapoenstraat 32 (invited people only, 18.00 hrs)
4. Bus stop (Busses leave every 5 – 10 minutes downtown, it is a 10 minutes ride)

Catering

Free coffee / tea / water is available at the exhibition area for congress participants and exhibitors at the coffee breaks. Lunches and other food can be bought at the main floor. There you find the restaurants MECC@table, MECCafe and The Family.

Young acousticians

On Monday afternoon prior to the welcome drink, Young NAG (NL) and B-YAN (BE) have prepared a short program for all young acousticians at Euronoise on behalf of YAN (Young Acousticians Network). Professionals from parallel disciplines will share their vision on how a rich interdisciplinary working environment have inspired their careers and, consequently, improved their results. The meeting will kick-off with a demonstration of several artistic installations made by **Hans Van Koolwijk** (sound artist): "To me sound is matter. I work with sound like sculptors work with stone or clay. I feel the necessity to form sounds into sculpture; you must be able to see sound, as it were. Fascinated by the foundations of sound, I experimented with principles of physics." Hans is bringing a selection of his works and will be performing live for all participants of Euronoise 2015 in the lobby on Monday afternoon.

The meeting will be concluded with a drink at which participants can meet fellow young acousticians.

With support from:



WIFI

Free wifi is available in the whole congress centre:
Network = Euronoise, Code = euro@2015

Public transport

Congress registration includes free use of public transport (only busses) inside the city of Maastricht. Please show the ticket you received at the registration desk when asked by the bus driver.

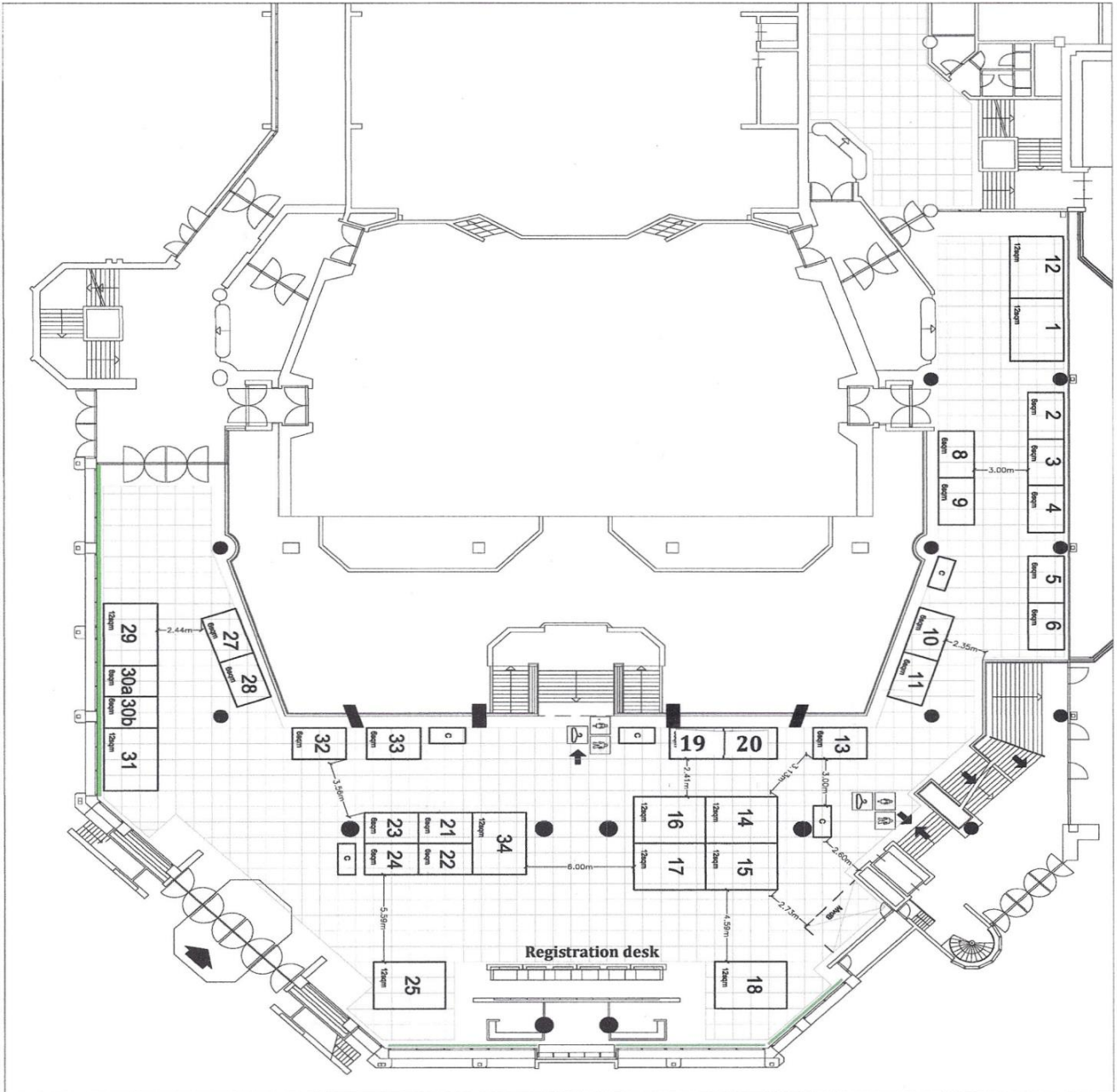
Congress dinner:

The congress dinner will be served on a boat trip over the Maas river. Embarkation is at 19.30, at the embarkation point in the city centre (marked on the map above). The boat will leave at 20.00 at the latest. Do not miss the boat!

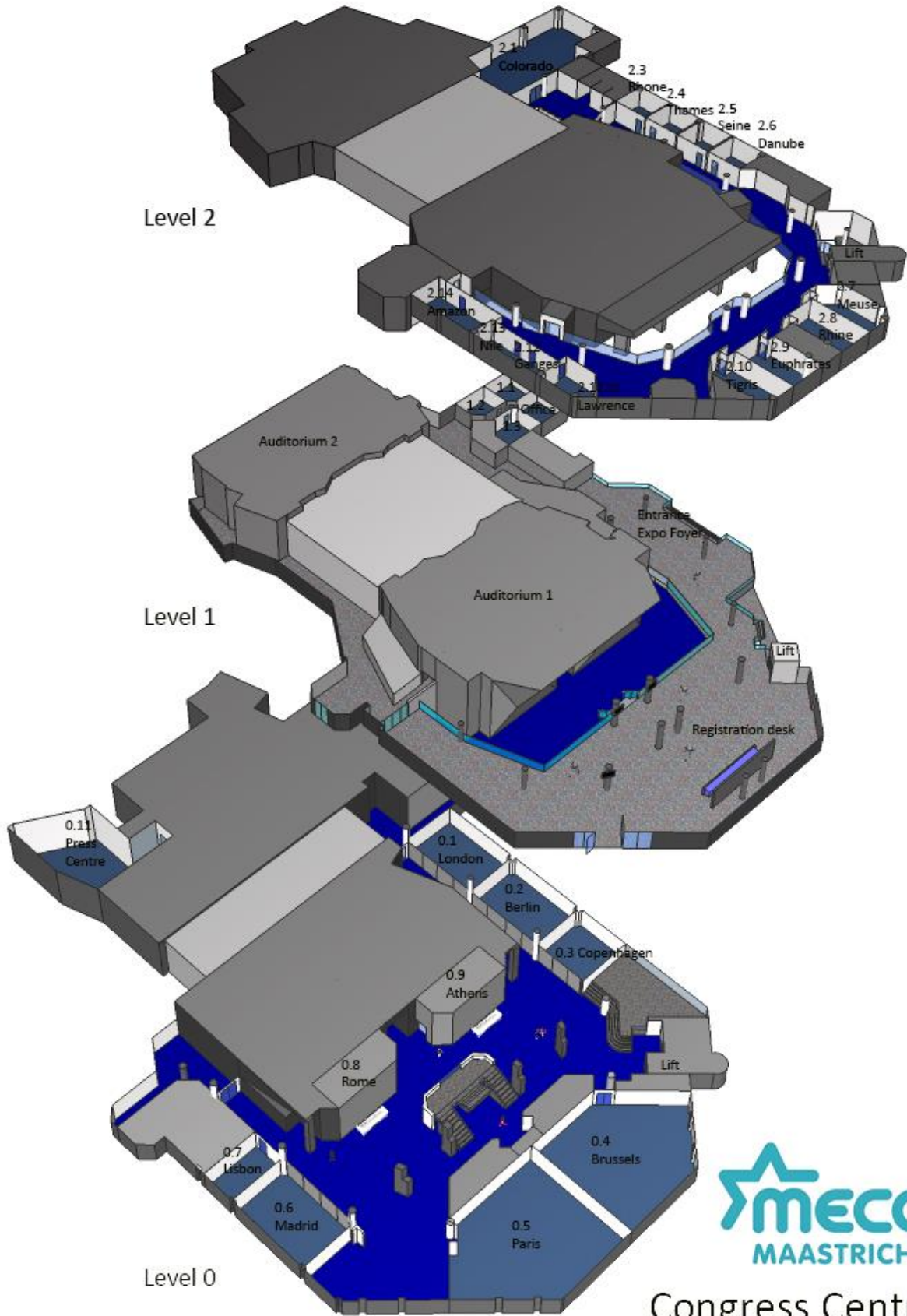
Exhibition

Euronoise 2015 will host an extended European Acoustics Exhibition where companies, manufacturers, engineering service providers, research institutes, technical and scientific organizations and publishers will inform about their newest equipment and instrumentation, methods, software solutions, materials, standards, guidelines and publications.

Place:	Company:
1	Softnoise
2 + 3	PCB Piezotronics / Larson Davis
4	BSTEEN bvba
5+6	Merford
8	CDM / Delta L
9	RION
10 + 11	G.R.A.S. Sound & Vibration A/S
12	Kraiburg Relastec GmbH & Co. KG
13	Acoustics Engineering
14	ACOEM
15	DGMR
16	Ecophon (Silver sponsorship)
17	Müller-BBM (Silver sponsorship)
18	AMC Mecanocaucho
19	Alara-Lukagro Noise Control Solutions
20	Sonogamma
21	Brüel & Kjær
22 + 24	Microflown Technologies B.V.
23	Odeon A/S
25	SVANTEK Sp. Z.O.O.
27	HEAD acoustics GmbH
28	NTi Audio AG
29	BSW GmbH
30b	Norsonic
30a	Eco-scan
31	SINUS Messtechnik GmbH
32	ABC International Trade B.V.
33	Soundplan International LLC
34	Barissol (Gold sponsor)



FLOORMAP



Congress Centre

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Monday 1 June, 2015

Plenary lecture: Listening (Auditorium 2)

9:40 Plenary Lecture: Sound and Safe: A History of Listening Behind the Wheel by **K. Bijsterveld**.

Plenary lecture: Computational acoustics (Auditorium 2)

13:50 Plenary Lecture: Numerical Techniques for Acoustics and Vibrations: Virtual Tools for Real Problems by **W. Desmet**.

Acoustical aspects of timber structures (Auditorium 2)

- 11:00 Improvement of airborne sound insulation of lightweight timber framed walls through prefabricated multilayer wood studs by **V. Desarnaulds, R. Fecelier**.
- 11:20 SEA based prediction for integrated vibro-acoustical design optimization of multi-storey buildings by **A. Rabold, M. Schramm, C. Châteaueux-Hellwig**.
- 11:40 ACA – New Research and Testing Competence for Timber Constructions with a focus on low frequencies in Austria by **F. Dolezal, H. Müllner, M. Neusser, M. Teibinger**.
- 12:00 Measurement and calculation of sound transmission across junctions of solid timber building elements by **S. Mecking, T. Kruse, U. Schanda**.
- 12:20 Flanking Sound Insulation of Timber Walls combined with different Timber Hollow Box Floors by **C. Geyer, A. Müller, A. Melián Hernández**.

Structural acoustics and vibrations (Auditorium 2)

- 14:40 Replacable building base isolation by **M. Vanstraelen**.
- 15:00 Transmission of Vibroacoustic Energy Through the Structures of a Car Body Into the Protected Area and its Control by **S. Žičan, O. Chlebo**.
- 15:20 An applied research of seismic and vibration resistance of the equipment with assessment of seismic and vibration effects by **A. Horniaková, J. Keníž, M. Musil**.

Airborne and Impact sound transmission - measurement methods (Auditorium 2)

- 15:40 Building acoustics measurements: an innovative solution with automatic recognition and optimized workflow by **E. Aflalo, S. Bloquet, T. Poli**.
- 16:00 Measurement of flanking sound transmission at low frequencies with a laser doppler vibrometer by **S. Schoenwald, H.-M. Tröbs, A. Zemp**.
- 16:20 Measurement of the dynamic stiffness of porous materials taking into account their airflow resistivity by **C. Crispin, C. Mertens, B. Ingelaere**.
- 17:00 On the use of laser Doppler vibrometry in building acoustics by **N.B. Roozen, M. Rychtáriková, H. Müllner, C. Glorieux**.
- 17:20 Assessment of acoustical insulation of double glass building element by laser Doppler vibrometry and microphone measurements by **C. Glorieux, D. Urbán, N.B. Roozen, L. Labelle, M. Rychtáriková**.
- 17:40 Comparison of strategies for the experimental analysis of airborne sound insulation of building elements by **L. Godinho, A. Neves, J. Nascimento, I. Castro, P. Amado-Mendes**.
- 18:00 Popvenues in living areas by **M. Luykx, M. Lautenbach, M. Vercaemmen**.

Noise Barriers (0.2 Berlin)

- 11:00 Japanese experience to reduce road traffic noise by various noise reducing devices by **K. Yamamoto**.
- 11:20 The project for noise barriers and others NRD for transport infrastructures: An overall vision and implementation experience in the countries of southern Europe by **D.M.**

Alegre.

- 11:40 The European standards for noise barriers for roads and railways: state of the art 2015 by **J.-P. Clairbois, M. Garai.**
- 12:00 Comparison between laboratory and in-situ methods for measuring sound reflection properties of noise barriers by **M. Conter, R. Wehr.**
- 12:20 Optimizing the exponential sine sweep (ESS) signal for in situ measurements on noise barriers by **M. Garai, P. Guidorzi.**
- 14:40 The application of Solar-Noise Barriers for UK highways and their combined benefits for local government, developers and the wider community by **G. Parker.**
- 15:00 Phonobloc® rail track – in-situ tested low noise barriers in platform-design made of concrete by **G. Lanz, M. Jaksch.**
- 15:20 Acoustic Effect of Drainage Gaps in Noise Barriers by **F. Peeters, W.-J. Van Vliet.**

Computational acoustics for offshore pile driving noise (0.2 Berlin)

- 16:20 Numerical determination of equivalent damping parameters for a finite element model to predict the underwater noise due to offshore pile driving by **K. Heitmann, T. Lippert, M. Ruhnau, S. Lippert, O. Von Estorff, S. Mallapur.**
- 16:40 Predictions of the Effects of Elastic Seabed on Noise Radiated during Marine Pile Driving by **L.S. Wang, P. Theobald, S. Robinson.**
- 17:00 A three-dimensional semi-analytical model for the prediction of underwater noise from offshore pile driving by **A. Tsouvalas, A. Metrikine.**
- 17:20 Finite difference computational modelling of marine impact pile driving by **A. Macgillivray.**
- 17:40 Validating a wavenumber integration model for the prediction of underwater noise due to offshore pile driving by **M. Ruhnau, T. Lippert, K. Heitmann, S. Lippert, O. Von Estorff.**
- 18:00 Evaluation of the impact of the uncertainties on environmental data for far-field propagation in shallow water with Split-Step Padé PE by **S. Lesoinne, A. Barth, X. Kaiser, J.-J. Embrechts, A. Gillet, R. Moelans.**
- 18:20 The Use Numerical Modelling to Assist and Improve Industrial Understanding of Underwater Noise and Relevant Mitigation Measures by **J. Kringelum, P. Skjellerup.**

Techniques for virtual acoustics (0.3 Copenhagen)

- 11:00 Acoustic Source Localisation In An Urban Environment Using Early Reflection Information by **F. Stevens, D. Murphy.**
- 11:20 Physical Properties of Local Wave Field Synthesis using Circular Loudspeaker Arrays by **F. Winter, S. Spors.**
- 11:40 Frequency Dependent Absorbing Boundary Implementations in 3D FDTD Room Acoustics Simulations by **S. Oxnard, D. O'Brien, D. Murphy, J. Van Mourik.**
- 12:00 Virtual sound generation by linear modal synthesis based on recorded audio examples by **I. Muhammad, J.Y. Jeon.**

Noise Mapping (incl. CNOSSOS/EU/China) (0.3 Copenhagen)

- 14:40 Noise mapping State of art – is it just a simple as it looks like - Pitfalls by **H.J.A. Van Leeuwen, S.E.H. Van Banda.**
- 15:00 A color scheme for the presentation of sound immission in maps: requirements and principles of design by **B. Weninger.**
- 15:20 Comparison of German Road Traffic Noise Calculation Method to the new Common Noise Assessment Methods by **J. Müller, W. Bartolomaeus.**
- 15:40 GIS data and noise maps: shall they be INSPIRE compliant? by **A. Kotsev, S. Kephelopoulos, H. De Groof, A. Abramic, P. Smits, V. Lima.**

- 16:00 The Effectiveness of Quiet Facade on Account of Chinese Residential Layout by **X. Lu**.
- 16:20 Application of Noise Mapping in Environmental Noise Management in Hangzhou, China by **B. Zhang, W. Hu, R. Wu, L. Liu, J. Yang**.
- 17:00 The required accuracy in the new Common Noise Assessment Method by **M. Paviotti, P. De Vos**.
- 17:20 Conversion of existing road source data to use CNOSSOS-EU by **S. Shilton, F. Anfosso Ledee, H.J.A. Van Leeuwen**.
- 17:40 Conversion of existing railway source data to use CNOSSOS-EU by **M. Paviotti, S. Shilton, R. Jones, N. Jones**.
- 18:00 Feasibility of using the CNOSSOS-EU road traffic noise prediction model with low resolution inputs for exposure estimation on an international scale by **J. Gulliver, K. De Hoogh, D. Fecht, F. Fabbri, M. Bell, P. Goodman, P. Elliott, S. Hodgson, D. Morley**.

Non auditory health effects of noise (0.4 Brussels)

- 11:00 Does the Exposure to Aircraft Noise Increase the Risk of Hypertension near French Airports? by **A.-S. Evrard, M. Lefèvre, P. Champelovier, J. Lambert, B. Laumon**.
- 11:20 The Relationship between Exposure to Traffic Noise and Resting Blood Pressure in Children and Adolescents from Belgrade by **G. Belojevic, J. Ilic-Zivojinovic, K. Paunovic, B. Jakovljevic**.
- 11:40 Noise and hypotension - potential association and moderation by **P. Lercher**.
- 12:00 Residential exposure to traffic noise and risk for non- Hodgkin lymphoma and chronic lymphoid leukemia in an adult population by **M. Sørensen, O. Raaschou-Nielsen**.
- 12:20 Effects of aircraft noise on reading and oral language abilities in German children near Frankfurt/Main airport: Results of the NORAH (noise-related annoyance, cognition, and health)-study by **M. Klatte, J. Spilski, J. Mayerl, U. Möhler, T. Lachmann, K. Bergström**.
- 12:40 Source-specific traffic noise exposure and cardiovascular mortality in Switzerland by **D. Vienneau, H. Héritier, M. Foraster, M. Brink, C. Cajochen, I.C. Eze, M. Köpfli, J.-M. Wunderli, N. Probst-Hensch, M. Röösli**.
- 14:40 Annoyance to transportation noise and risk of physical inactivity by **M. Foraster, I.C. Eze, D. Vienneau, M. Brink, C. Cajochen, H. Héritier, J.-M. Wunderli, M. Röösli, N. Probst-Hensch**.
- 15:00 Associations of road traffic noise with mortality and hospital admissions in London by **J. Halonen, A. Hansell, J. Gulliver, M. Blangiardo, D. Fecht, S. Beevers, R. Anderson, C. Tonne**.
- 15:20 Health Impact Assessment of airport noise on people living nearby six Italian airports by **C. Ancona, M. Golini, F. Mataloni, D. Camerino, M. Chiusolo, G. Licitra, M. Ottino, S. Pisani, L. Cestari, M.A. Vigotti, M. Davoli, F. Forastiere, I. Sera Study Group**.
- 15:40 Associations of road traffic noise, blood pressure and heart rate in three harmonized European cohorts by **W. Zijlema, Y. Cai, D. Doiron, K. De Hoogh, D. Morley, S. Hodgson, H. Kongsgard, K. Hveem, R. Stolk, J. Rosmalen**.
- 16:00 Road traffic noise, Air pollution and Cardio-respiratory Health in European Cohorts: a Harmonised Approach in the BioSHaRE Project by **Y. Cai, M. Blangiardo, K. De Hoogh, J. Gulliver, D. Morley, D. Doiron, P. Elliott, A. Hansell, S. Hodgson**.

Annoyance & health effects of vibration & combined exposures (0.4 Brussels)

- 16:20 How Many Indicators for Vibration Exposure are Needed? by **M. Van Den Berg**.
- 16:40 Rational regulations for vibrations from rail traffic by **M. Van Den Berg**.
- 17:00 Comparison of annoyance from railway noise and railway vibration by **M. Ögren, M. Smith, K. Persson Waye**.
- 17:20 Do current guidelines on vibration provide sufficient health protection at the community

- level independent of the accompanying soundscape? by **M. Cik, P. Lercher**.
- 17:40 The use of vibration health response information in the framework of environmental health impact assessments: technical issues of implementation and interpretation by **B. Tappauf, M. Cik, P. Lercher**.
- 18:00 Annoyance due to vibration from freight railway lines in the Netherlands and Poland by **S. Janssen, B. Zuada Coelho, A. Koopman, E. Peris, W. Groll, K. Wisniewska**.
- 18:20 Health effects of vibrations due to trains by **I. Van Kamp, E. Van Kempen, H. Van Wijnen, E. Verheijen, T. Istamto, O. Breugelmans, L. Dirven, A. Koopman**.

Wind turbine noise: Human impact/Guidelines (0.6 Madrid)

- 11:00 Annoyance potential of wind turbine noise compared to road traffic noise by **B. Schäffer, S. Schlittmeier, K. Heutschi, M. Brink, R. Graf, R. Pieren, J. Hellbrück**.
- 11:20 Low Frequency Noise Proposed Wind Farm in Maastricht, The Netherlands by **E. Koppen**.
- 11:40 International Legislation for Wind Turbine Noise by **E. Koppen, K. Fowler**.
- 12:00 The Influence of Visual Information on Assessment of Wind Turbine Noise by **A. Preis, M. Szychowska, H. Hafke-Dys, J. Kocinski**.
- 12:20 Differences in noise requirements for wind turbines in four European countries by **E. Nieuwenhuizen, M. Köhl**.

Airport noise and its management (0.6 Madrid)

- 14:40 Capri Island helicopter noise control by **A. Papa, P. Addonizio**.
- 15:00 Assessment of Environmental Noise due to Aircraft Operation at the CORFU International Airport according to the 2002/49/EC Directive and the new Greek National Legislation by **K. Vogiatzis**.
- 15:20 Estimating Variation in Community Noise Due to Variation in Aircraft Operations by **A. Synodinos, R. Self, I. Flindell**.
- 15:40 A Combined Qualitative/Quantitative Approach to the Design of Noise Annoyance Studies by **I. Flindell, P. Le Masurier**.
- 16:00 Harmonizing noise abatement and urban development by **N. Mahler, H. Boegli**.
- 16:40 Noise Reduction for a High Performance Military Aircraft – General Approach and Current Status by **E. Grigat**.
- 17:00 Flat Plate Installation Effects on Velocity and Wall Pressure Fields Generated by an Incompressible Jet by **M. Mancinelli, A. Di Marco, R. Camussi**.

Noise control at power plants (0.6 Madrid)

- 17:20 Identification of a vibration pattern from pressure measurements and radiation modes by **P. Herzog, R. Guillermin, P. Lorin, E. Van Lancker, V. Chritin**.
- 17:40 Active noise control in practice: transformer station by **E. Buikema, F. Van Der Ploeg**.
- 18:00 Experimental Investigation on Acoustic Effects of Trailing Edge Modifications of Splitter Attenuators for Power Generation Systems by **C. Sebastiani, C.-C. Hantschk, H.-J. Kaltenbach**.
- 18:20 Acoustic and flow analysis to reduce boiler hum by **T. Campmans**.

Time domain modelling (0.7 Lisbon (47))

- 11:00 Non linear N wave source impedance model by **D.K. Singh**.
- 11:20 Radiation of moving sources in time-domain simulations of outdoor sound propagation by **D. Dagna, P. Blanc-Benon**.
- 11:40 A hybrid PSTD/DG method to solve the linearized Euler equations by **R. Pagán Muñoz, M. Hornikx**.
- 12:00 Time domain modeling for impulse source localization in urban environments by **S. Cheinet, L. Ehrhardt, T. Broglin**.

12:20 A Novel Method of Vertical Axis Wind Turbine Noise Prediction by **J. Botha**.

Computational acoustics / general (0.7 Lisbon)

- 14:40 A quasi-potential flow formulation for the prediction of the effect of the circulation on the acoustic shielding from a lifting body by means of a finite element method by **S. Mancini, M. Tournour, R.J. Astley, G. Gabard, S. Sinayoko**.
- 15:00 Noise Reduction of an Electric Motor by Using a Numerical Model by **A.A. Uslu**.
- 15:20 Numerical integration methods for the solution of Helmholtz equations with the Wave Based Technique by **P. Zsifkovits, A. Hepberger, G. Offner**.
- 15:40 Simulation of Aerodynamically Generated Sound Using Hybrid Aeroacoustic Methods by **J. Hammar, G. Efraimsson, C. O'Reilly**.
- 16:00 Nonlinear modeling of thermoacoustic systems by **J.A. De Jong, Y. Wijnant, A. De Boer**.

How the Dutch handle highway noise (0.7 Lisbon)

- 16:40 The Dutch Road Noise Mitigation Program by **N. Faber**.
- 17:00 Modelling and monitoring Dutch highway traffic noise production by **T. Veger, A. Dijkstra, R. Nota, R. Jonker**.
- 17:20 Traffic Noise Management: The Dutch Approach by **R. Jonker, W. Alberts**.
- 17:40 The effective planning of measures in relation to other work such as maintenance of pavements by **P. Paffen**.
- 18:00 Noise measures in road construction works by **W.-J. Van Vliet**.

Standardization, classification and noise labeling (0.8 Rome)

- 11:00 A noise label for motor vehicles: towards quieter traffic by **J. Sliggers**.
- 11:20 Sound space for Industrial noise now and in the future by **R. Bruinsma**.
- 11:40 Community noise: a fundamental ingredient of an environmental health performance indicator (CHERIO) by **D. Houthuijs, E. Van Kempen, W. Swart, A. Van Beek, F. De Leeuw, A. Dusseldorp, J. Van Engelen, D. De Gruijter, H. Kruize, B. Staatsen**.
- 12:00 www.noiseineu.eu: New tools to inform the public about environmental noise in cities and to assist decision-making by **F. Mietlicki, C. Mietlicki, C. Ribeiro, P. Gaudibert, B. Vincent**.

Local noise policies (0.8 Rome)

- 14:40 Assessment and Management of Environment Noise in Turkey by **S. Shilton**.
- 15:00 Healthy urban living: integration of noise in other local policy domains by **M. Weber**.
- 15:20 Green urban mobility, much quieter; it is not a castle in the air! by **H. Wolfert, C. Verweijen**.
- 15:40 Extended Cost / benefit analysis for noise control for municipal and provincial roads by **M. Van De Klundert**.
- 16:00 DYNAMAP: a new approach to real-time noise mapping by **G. Zambon, R. Benocci, A. Bisceglie**.
- 16:40 Noise Action Planning at Airports under Difficult Political Conditions – Technical Methods and Procedures for Successful Support by **M. Petz**.
- 17:00 Old Rhine ships have to be quiet too by **C. Ostendorf, N. Geebelen, A. Koopman, C. Laudij**.
- 17:20 Noise from Livestock Husbandry – Introducing a new Basis for Assessment by **M. Kropsch, C. Lechner**.
- 17:40 Noise standards for electronically amplified music in Flanders (Belgium) by **G. Pée, G. Vindevogel**.

Room acoustic measurement and predictions (0.9 Athens)

- 11:00 Measurement of 3D Room Impulse Responses with a Spherical Microphone Array by **J.-J. Embrechts**.
- 11:20 A physically-motivated parametric model for compact representation of room impulse responses based on orthonormal basis functions by **G. Vairetti, T. Van Waterschoot, M. Moonen, M. Catrysse, S.H. Jensen**.
- 11:40 Localization-assisted indoor acoustical data monitoring by **N. Prodi, A. Conti, F. Lodi, S. Bartoletti, J.S. Dekhordi**.
- 12:00 Room impulse response measurement and delay-and-sum beamforming, application to room and building acoustics by **S. Barré**.
- 12:20 A bootstrap estimation of confidence levels in reverberation time measurements at low frequencies by **D. Pérez Cabo, M.A. Sobreira Seoane, J.R. Fernández Bernárdez**.
- 14:40 Different radiation impedance models for finite porous absorbers by **M. Nolan, C.-H. Jeong, J. Brunskog, J. Rodeñas, F. Chevillotte, L. Jaouen**.
- 15:00 Uncertainty in sound diffusion and scattering coefficients measurement by **A. Pilch, D. Behounek, P. Pawlik, T. Kamisinski, J. Rubacha**.
- 15:20 Evaluation of a Numerical Method for Identifying Surface Acoustic Impedances in a Reverberant Room by **N. Antonello, T. Van Waterschoot, M. Moonen, P. Naylor**.
- 15:40 Effects of Different Diffusor Types on the Diffusivity in Reverberation Chambers by **M. Nolan, M. Vercammen, C.-H. Jeong**.
- 16:00 Overhead stage canopies – case studies by **T. Kamisinski, A. Szeląg, A. Pilch, K. Brawata, J. Rubacha**.
- 16:20 Simulation of Diffractions and Reflections of arbitrary order with the Sound Particle Diffraction Model based on the Uncertainty Relation by **S. Weigand, A. Pohl, U. Stephenson**.
- 17:00 Comparing a Phased Combination of Acoustical Radiosity and the Image Source Method with Other Simulation Tools by **G. Marbjerg, J. Brunskog, C.-H. Jeong, E. Nilsson**.
- 17:20 Influence of Source-Receiver Distance in Reverberant Room on Front-Back Confusion by **M. Rychtáriková, D. Pelegrin Garcia, N.B. Roozen, C. Glorieux**.
- 17:40 Important simulation parameters for open plan office acoustics by **J. Jagla, C. Benoit**.
- 18:00 Appropriate background noise level regarding speech privacy and annoyance in a train cabin by **J.Y. Jeon, J.Y. Hong, H.S. Jang**.
- 18:20 The Role of Acoustic Reviews in Influencing Restaurant Acoustics by **S. Camp**.

Tuesday 2 June, 2015

Auditory and Multisensory perception (Auditorium 2)

- 8:40 Assessment of participatory-multisensorial tasting experiences based on customized soundscapes by **F. Reinoso Carvalho, A. Touhafi, K. Steenhaut, M. Rychtáriková, R. Van Ee, M. Leman.**
- 9:00 Alarm Fatigue in the Perception of Medical Soundscapes by **M.S.E. Kristensen, E. Özcan, J. Edworthy, S. Denham.**
- 9:20 Human echolocation: localizing reflections of self-generated oral sounds in laboratory by **D. Pelegrin Garcia, M. Rychtáriková, C. Glorieux.**

Workshop: European noise policy: where do we go? (supported by European Commission DG environment) (Auditorium 2)

- The environmental noise Directive at a turning point by **I. Juraga, B. Berger, M. Paviotti.**
- 9:40 Differences Between the Principles of the European National Noise Laws and Those of the Environmental Noise Directive by **G. Licitra.**
- 11:40 The process required to achieve an effective noise reduction in a city by **H.J.A. Van Leeuwen, P. De Vos.**
- Is noise a problem for the citizen? by **S. Turner.**
- Discussion

Plenary lecture: Speech intelligibility in Noise (Auditorium 2)

- 12:00 Plenary Lecture: Speech Intelligibility in Noise: How Does our Auditory System Get Rid of the Noise? by **S. Van De Par.**

Excitation of building elements by structure-borne and airborne sources (Auditorium 2)

- 13:40 Frequency Band Averaged Data for Prediction of Structure-borne Sound Power from Mechanical Installations in Buildings by **B. Gibbs.**
- 14:00 Characterization and vibration isolation of building service equipment mounted on lightweight structures by **M. Villot, S. Bailhache.**
- 14:20 Measured transfer functions from structure-borne sound sources in a timber-frame construction by **F. Schöpfer, C. Hopkins, A.R. Mayr, U. Schanda.**
- 14:40 Laboratory characterisation and prediction of structure-borne sound transmission of sanitary installations in heavyweight buildings by **S. Reinhold, J. Scheck, H.-M. Fischer, A. Ruff, C. Hopkins.**
- 15:00 Application of the Concept of Reference Timber Joist Ceiling by **J. Seidel.**
- 15:20 Sound Insulation of Walls with a new Mortar-Mix System by **M. Schneider.**
- 16:00 Design Process to evaluate potential of wind noise at façade elements by **F. Coppa, C. Paduano.**
- 16:20 Direct Sound Transmission Loss of Heavy Gauge Steel Stud Walls by **C. Hoeller, B. Zeitler, J. Mahn.**
- 16:40 Description of the acoustic characteristics of ETFE roof structures by **S. Bron Van Der Jagt, C. Laudij, E. Gerretsen, E. Phaff, T. Raijmakers.**
- 17:00 Laboratory Studies of Protection against Propagation of Impact Noise from Staircases by **A. Izewska, B. Szudrowicz.**
- 17:20 Classification of Heavy-weight floor impact sounds based on perceptual noise levels and annoyance by **S.M. Kim, J.Y. Hong, J.Y. Jeon.**
- 17:40 Rolling noise model for building acoustics purposes by **F. Chevillotte, F.-X. Bécot, L. Jaouen.**

Sound insulation of lightweight structures (0.1 London)

- 8:40 The Radiation Impedance of a Rectangular Panel by **J.L. Davy, D.J. Larner, R.**

Wareing, J. Pearse.

- 9:00 On the Influence of the Junctions on Wooden Buildings Structural-Acoustic Behaviour by **D. Blon, O. Dazel, J.-M. Genevaux, B. Brouard, A. Tribaleau.**
- 9:20 Modelling of patterned fibre constrained layer damping for composite materials by **A. Verstappen, J. Pearse.**
- 9:40 Acoustic properties of composite lightweight structures by **E.A. Piana, A. Nilsson.**
- 10:00 Are laboratory tests and prediction models useful in building construction projects? by **F. Verbandt, J. Vandendriessche, B. Van De Velde.**
- 10:20 Description of the research project CIMEDE for the industrial construction of evolutionary, sustainable and economic houses by **F. Duthoit.**
- 11:00 Assessment of sound transmission characteristics of traditional timber-framed dwellings in Ankara, Turkey by **M. Erdil, A. Tavukcuoglu, M. Caliskan.**
- 11:20 A study of sound Absorption behaviors of Fiber wood panel by **C. Demanet.**
- 11:40 Sound Transmission Characteristic through Mechanically Connected Laminated Composite Double Wall Panel by **P. Bhattacharya, A. Sahu, M. Rose.**

Railway vibration and ground-borne noise (0.1 London)

- 13:40 Modelling the dynamic pile-soil-pile interaction in a multi-layered half-space by **W. Hamad, E. Ntotsios, H. Hunt, M.F.M. Hussein, D. Thompson, J. Talbot.**
- 14:00 Effect of rail unevenness correlation on the prediction of ground-borne vibration from railways by **E. Ntotsios, D. Thompson, M.F.M. Hussein.**
- 14:20 Transmission of underground-induced vibration to the ground surface: a comparison of 2D, 2.5D and 3D models by **P. Jean, M. Villot.**
- 14:40 Experimental validation of a numerical model for the ground vibration from trains in tunnels by **Q. Jin, D. Thompson, D. Lurcock, M. Toward, E. Ntotsios, S. Koroma, M.F.M. Hussein.**
- 15:00 A catalogue of vibration reducing measures for railways by **R. Cornelis, J. Van Den Brink, C. Ostendorf.**
- 15:20 Laboratory Measurement of the Vibration Attenuation Performance of the Rail Fastening System by **D. Desmyter, S. Cox, J. Cailliau.**

High speed train noise (Europe/China exchange) (0.1 London)

- 16:00 The Pollution Control of Urban Elevated Railway Traffic Noise by **Y. Liu, X. Deng, Y. Zhang, D. Qian.**
- 16:20 The Application of the Control Technology of the Noise Source and the Effect of Its Noise Reduction of Beijing- Shanghai High-speed Railway by **X. Gu, Y. Li, L. Liu, X. Wu.**
- 16:40 The Experimental Studies on High-speed Railway Noise Field Vertical Distribution and propagation characteristic by **Y. Li, L. Liu, X. Gu, L. Shao.**
- 17:00 Experimental study on the characteristics of noise sources in high-speed railway by **L. Liu, Y. Chen, X. Xing, C. He.**
- 17:20 Acquisition of exterior multiple sound sources for train auralization based on beamforming by **F. Meng, F. Wefers, M. Vorländer.**
- 17:40 Calculations of sound radiation associated with 'tunnel boom' from high-speed trains by **V. Krylov, W. Bedder.**

Tyre/road noise modelling (0.2 Berlin)

- 8:40 Modal testing and finite element modelling of a reduced-sized tyre for rolling contact investigation by **Y. Zhang, J. Cesbron, M. Bérengier, H.-P. Yin.**
- 9:00 Three dimensional modelling of sound absorption in porous asphalt pavement for

- oblique incident waves by **M. Bezemer-Krijnen, Y. Wijnant, A. De Boer.**
- 9:20 Mechanisms of acoustic aging of road surfaces by **R. Van Loon, G. Van Blokland, C. Tollenaar.**
- 9:40 Influence of Fiber-Reinforced Composite Wheel Resonance on tire cavity noise by **Y. Yang, Y. Wei.**
- 10:00 Modelling tools for the development of the Silent and Safe tyres by **B. Makwanan, B. De Bruijn, E. Verhulp, D.A. Bekke.**
- 10:40 Making road traffic bridges silent by **P. Van Den Dool.**
- 11:00 What you measure is what you get? - a novel approach for specifying and controlling acoustic quality of road surfaces by **A. Kuijpers, W. Schwanen, J. Van De Water, W.-J. Van Vliet.**

Solutions for lower tyre/road noise (0.2 Berlin)

- 13:40 A Model for Diffracting Elements to Reduce Traffic Noise by **Y. Wijnant, J. Hooghwerff.**
- 14:00 Whisstone, a sound diffractor: does it really affect traffic noise? by **J. Hooghwerff, F. Reinink, R. Van Der Heijden, Y. Wijnant.**
- 14:20 On site acoustic characterization of optimized very thin asphalt concretes by **J. Cesbron, P. Klein, V. Gary, J.-M. Clairet.**
- 14:40 Poroelastic Block Pavement as a Low Tyre/Road Noise Solution for Cities by **D. Kokot, M. Ramsak.**
- 15:00 Long-term Acoustical Performance of Low-noise Road Surfaces in Urban Areas in Switzerland by **E. Hammer, S. Steiner, M. Dias, E. Bühlmann.**
- 15:40 Influence of Environment- and Traffic-related Factors on Acoustical Ageing of Low-noise Road Surfaces in Switzerland by **E. Bühlmann, M. Dias, S. Steiner.**
- 16:00 Noise Generated by Tyres Designed for Electric Vehicles - Results of Laboratory Experiments by **J. Ejsmont, B. Swieczko-Zurek, S. Taryma, P. Mioduszewski.**
- 16:20 Tyre/road noise of passenger car tyres, including tyres for electric vehicles – road measurements by **T. Berge, F. Haukland, P. Mioduszewski, R. Wozniak.**
- 16:40 Laboratory measurements on Poroelastic test slabs from full scale test sections by **R.S.H. Skov, H. Bendtsen, J. Cesbron.**
- 17:00 Silent and Safe Roadtraffic-project: An optimization of the tyre-road interaction on noise and wet grip by **D.A. Bekke, G.O. Lansink, B. Bobbink, Y. Wijnant, D. Schipper, R. Stevens.**
- 17:20 Self Healing Asphalt: The 'match' between noise reduction and durability by **G. Van Bochove.**
- 17:40 Acoustical and Mechanical Impedance Measurements of PoroElastic Road Surfaces by **C. Vuysse, L. Goubert, M. Van Beveren, W. Van Den Bergh.**
- 18:00 "Noise climate" improvement as an opportunity at road reconstructions by **P. Driessen.**

Auralisation of urban sound (0.3 Copenhagen)

- 8:40 Auralisation of accelerating passenger cars by **R. Pieren, T. Büttler, K. Heutschi.**
- 9:00 Effect of Load on Engine Noise for the Auralization of Road Traffic by **J. Maillard, J. Jagla.**
- 9:20 Perceptual validation of auralized heavy-duty vehicle by **P. Bergman, A. Pieringer, J. Forssén, P. Andersson.**
- 9:40 Auralization of Urban Environments – Concepts towards New Applications by **M. Vorlaender, J. Stienen.**
- 10:20 Determining an Empirical Emission Model for the Auralization of Jet Aircraft by **R. Frederik, K. Heutschi.**
- 10:40 Auralisation of Finite Difference Time Domain Simulations of Sonic Crystal Noise

Barriers in an Urban Environment by **D. Murphy, S. Harriet.**

- 11:00 Measuring end-to-end delay in real-time auralisation systems by **J. Lamas, C. Silva, M. Silva, S. Mouta, J. Creissac Campos, J. Santos.**

Traffic strategies and noise impacts (0.3 Copenhagen)

- 11:20 Applying Intelligent Transport Systems to manage noise impacts by **I. Wilmink.**
- 11:40 From regional “strategic” maps to microscopic scale models: multi-scales approaches to improve the assessment of exposure to pollutants due to transportation by **X. Olny, B. Vincent.**

Recreational noise (0.3 Copenhagen)

- 13:40 The Inclusion of Recreational Activities in Strategic Noise Maps by **V. Rosão, Á. Grilo.**
- 14:00 Measurement Results at Outdoor Dance Festivals in Belgium by **M. Kok.**
- 14:20 Exposure to firework noise in festivals by **R. Passos, A. Carvalho, C. Rocha.**

Urban sound planning (0.3 Copenhagen)

- 14:40 The influence of soundscape on the tourists’ environmental quality perception in urban areas by **V. Puyana Romero, G. Brambilla, M. Di Gabriele, V. Gallo, L. Maffei.**
- 15:00 Traffic dynamics, road design and noise emission: a study case by **L. Estévez-Mauriz, J. Forssén, W. Kropp, G. Zachos.**
- 15:20 Characterisation of the soundscape in Valley Gardens, Brighton, by a soundwalk prior to an urban design intervention by **F. Aletta, E. Margaritis, K. Filipan, V. Puyana Romero, Ó. Axelsson, J. Kang.**
- 15:40 Research Outcomes for Urban Sound Planning from European Commission projects by **S. Alves, B. Altreuther, J. Scheuren.**
- 16:20 Identifying and recognizing noticeable sounds from physical measurements and their effect on soundscape by **K. Filipan, M. Boes, B. De Coensel, H. Domitrovic, D. Botteldooren.**
- 16:40 Limiting the Levels of Outdoor Music Clubs Sound Reinforcement Systems at Zrce, Croatia by **K. Jambrosic, H. Domitrovic, M. Horvat.**
- 17:00 The influence of urban canyon design on noise reduction for people living next to roads by **G.M. Echevarria Sanchez, T. Van Renterghem, D. Botteldooren.**
- 17:20 An Efficient Method to Calculate Sound Diffraction over Rigid Obstacles by **W. Wei, T. Van Renterghem, D. Botteldooren.**
- 17:40 A novel Speech intelligibility improvement method using maximizing Mutual Information measure by **E. Eideli, S.M. Ahadi, N. Faraji.**
- 18:00 Spatial categorization of urban sound environments based on mobile measurements by **A. Can, B. Gauvreau.**

Health related quality of life and noise (0.4 Brussels)

- 8:40 Hearing conservation campaigns for adolescents: visibility and effects reported by university students by **A. Bockstael, H. Keppler, T. Desloover, D. Botteldooren.**
- 9:00 Transportation noise and health related quality of life: perception of soundscapes, coping and restoration by **P. Lercher, E. Von Lindern.**
- 9:20 Variation in tone presentation by Pure Tone Audiometers: the potential for error in screening audiometry by **C. Barlow, L. Davison, M. Ashmore.**
- 9:40 The association between road traffic noise exposure, annoyance and health-related quality of life (HRQOL) by **H. Héritier, D. Vienneau, P. Frei, I.C. Eze, M. Brink, N. Probst-Hensch, M. Röösli.**
- 10:00 The Restorative Effects of Pleasant Urban Areas in the Netherlands: the Role of Sound Quality by **E. Van Kempen, I. Van Kamp, W. Swart, J. Devilee, C. Ameling.**
- 10:20 Noise sensitivity and musical background by **M. Heinonen-Guzejev, M. Kliuchko, K.**

Heikkilä, V. Spinosa, M. Tervaniemi, E. Brattico.

- 11:00 Are Urban Park Soundscapes Restorative or Annoying? by **S. Payne, H. Nordh, R. Hassan.**
- 11:20 Low frequency noise in relation to health effects: A systematic review by **C. Baliatsas, I. Van Kamp, R. Van Poll.**
- 11:40 Effects of aircraft noise on annoyance and quality of life in German children near Frankfurt/Main airport: Results of the NORAH (noise-related annoyance, cognition, and health)-study by **K. Bergström, J. Spilski, J. Mayerl, U. Möhler, T. Lachmann, M. Klatte.**

Sleep and noise (0.4 Brussels)

- 13:40 Free field evaluation of the influence of naturalistic road and rail traffic noise on both psychological and physiological parameters by **M. Cik, M. Lienhart, K. Fallast.**
- 14:00 Physiological reaction thresholds to vibration during sleep by **M. Smith, M. Ögren, O. Hammar, K. Persson Waye.**
- 14:20 Nocturnal Road Traffic Noise and Children's Sleep by **K.V. Weyde, G.M. Aasvang, B. Oftedal, N. Krog.**
- 14:40 Predictions of Sleep Disturbance for Different Nighttime Airport Operation Strategies Using a New Markov State Transition Sleep Model by **S. McGuire, M. Basner.**
- 15:00 Traffic Noise, Insomnia and Sleep Medication Use by **J. Evandt, B. Oftedal, N. Hjertager Krog, S. Skurtveit, E. Skovlund, P. Nafstad, P. Schwarze, G.M. Aasvang.**

Annoyance effects due to noise sources (0.4 Brussels)

- 15:40 How new temporal and spectral indices improve indicators of noise annoyance due to urban road vehicle pass-by noise by **A. Klein, C. Marquis-Favre, R. Weber.**
- 16:00 Frequency Weightings Based on Subjectively Dominant Spectral Regions by **A.J. Torija, I. Flindell, R. Self.**
- 16:20 Effects of non-acoustic factors on of annoyance caused by floor impact sounds: A structural equation analysis by **P.J. Lee, S.H. Park.**
- 16:40 First Steps in the Development of the new WHO Evidence Review on Noise Annoyance by **R. Guski, D. Schreckenberg.**
- 17:00 The Effect of Noise from Overflying Aircraft on a Young Adult Population by **F. Van Den Berg, I. Van Moorselaar, C. Verhagen.**
- 17:20 Social Noise Exposure in University Students in Slovakia by **L. Argalasova, A. Filova, J. Jurkovicova, K. Hirosova, J. Babjakova, L. Sevcikova.**
- 17:40 Exposure to road traffic noise and risk for behavioral problems in 7-year old children: a cohort study by **D. Hjortebjerg, A.-M. Nybo Andersen, J. Schultz Christensen, M. Ketzel, O. Raaschou-Nielsen, J. Sunyer Deu, J. Julvez, J. Fornis Guzmán, M. Sørensen.**
- 18:00 Assessment of Impulse Noise regarding Harmfulness to Hearing by **B. Hohmann.**

Industrial noise control (0.6 Madrid)

- 8:40 Experiences of a Polyurethane-Manufacturer with the Elastic Decoupling of Machines by **T. Schoenherr.**
- 9:00 Evaluation of Noise in Sensitive Living Quarters aboard Floating Offshore Oil & Gas Facilities Using the SEA Method by **K. Fowler, B. Gardner, M. Burrill.**
- 9:20 Noise Risk as Described in Instructions for Printing Machinery Supplied in Europe by **P. Brereton, J. Patel.**
- 9:40 High Frequent Noise from Variable Speed Drive Electric Motors by **K. Selvåg, A. Krogvig.**
- 10:00 System of tradable sound rights, study by **H. Spierenburg.**
- 10:40 Benchmark indicators for industrial noise emission by **T. Van Diepen, A. Van Wijk, J. Granneman.**

- 11:00 Regulation of noise from moored ships in ports by **R. Witte**.
- 11:20 Operational Transfer Path Analysis applied to a Ship with Multiple Engines, Gearboxes and Propellers by **T. Keizer**.
- 11:40 Action Plan for Noise Abatement in Chemical Plant – Coverage, Cooperation by **A. Montag, M. Berndt, M. Márkus**.

Construction noise (0.6 Madrid)

- 13:40 Construction and urban noise: automatic assessment of noise monitoring results by **E. De Beer, J. Granneman, W. Van Der Maarl**.
- 14:00 Protocol to manage construction noise in urban areas: practical case in Bilbao municipality by **I. Garcia Perez, I. Aspuru, I. Diez**.

Soundscape theory (0.6 Madrid)

- 14:20 Global and local sound quality indicators for urban context based on perceptible and acoustic variables by **C. Lavandier, P. Delaitre, C. Ribeiro**.
- 14:40 How to measure soundscape quality by **Ö. Axelsson**.
- 15:00 A method to collect representative samples of urban soundscapes by **J. Tardieu, C. Magnen, M.-M. Colle-Quesada, P. Gaillard, N. Spanghero-Gaillard**.
- 15:20 Soundscape visualization: a new approach based on automatic annotation and Samocharts by **P. Guyot, J. Piquier**.
- 15:40 New Insights into Soundscape Evaluations Using the Experience Sampling Method by **J. Steffens, D. Steele, C. Guastavino**.
- 16:20 From Soundscape to Meaningscape by **F.L. Nielbo**.
- 16:40 The role of activity in urban soundscape evaluations by **D. Steele, J. Steffens, C. Guastavino**.
- 17:00 Soundscape Streaming and Visualization for HCI Design by **H. Kobayashi**.
- 17:20 Evaluating the University Campus Soundscape: The Case of Tianjin University by **K. Sun, X. Liang, D. Botteldooren, B. De Coensel**.
- 17:40 A taxonomy of sounds both object and user centred by **P. Gaillard, J. Tardieu, M. Coler, C. Magnen**.
- 18:00 A pilot experiment on effects of motor and cognitive activities on memories of soundscapes by **E. Bild, M. Coler, D. Dubois, K. Pfeffer**.

Structured materials and metamaterials for the control of audible sound (0.7 Lisbon)

- 8:40 Nonlinear Structuring of Helmholtz Resonators for Increasing the Range of Sound Absorption by **E. Gourdon, A. Ture Savadkoohi**.
- 9:00 Acoustic resonant surface: from nearly-total reflection to nearly-total absorption of sound by **L. Schwan, O. Umnova, C. Boutin, H.-C. Shin, S. Taherzadeh, K. Attenborough**.
- 9:20 Low frequency sound absorption in porous material with periodically distributed dead-end pores by **P. Leclaire, O. Umnova, T. Dupont, R. Panneton**.
- 9:40 Gradient metamaterial layers as impedance matching devices for efficient sound absorption by **A. Azbaid El Ouahabi, V. Krylov, D. O'Boy**.
- 10:00 Design and Experimental Validation of a Plate with Internally Resonating Lattices for Low-frequency Vibro-acoustic Control by **F. Tateo, J. Michielsen, I. Lopez Arteaga, H. Nijmeijer**.
- 10:20 Extraordinary absorption of sound in porous lamella by **J. Christensen**.
- 11:00 Optimised thin Metaporous materials for absorption applications in the audible frequency range by **C. Lagarrigue, J.-P. Groby, V. Tournat**.
- 11:20 Sound absorption by a structure with straight rectangular tubes loaded by periodically distributed resonators by **J.-P. Groby, O. Umnova, Y. Aurégan**.

- 11:40 On inner resonance in highly contrasted composites Design of media with negative mass or stiffness by **C. Boutin**.

Numerical methods for sound absorbing materials (0.7 Lisbon)

- 13:40 Application of the Transfer Matrix and Finite Surface Size Correction to Room Acoustics Simulation by **A. Van Der Harten**.
- 14:00 A Wave Based Transfer Matrix Method for accurate simulation of acoustic problems with multilayered damping treatment by **S. Jonckheere, D. Vandepitte, W. Desmet**.
- 14:20 A Multi-Level Wave Based Method to predict the dynamic response of 2D poroelastic materials containing holes or inclusions by **E. Deckers, W. Desmet**.
- 14:40 Development of the partition of unity finite element method for the 3D analysis of interior sound fields by **M. Yang, E. Perrey-Debain, B. Nennig, J.-D. Chazot**.
- 15:00 Calculation of internal powers for anisotropic porous materials within multilayered structures based on plane wave approximation by **J.P. Parra Martinez, O. Dazel, P. Göransson, J. Cuenca**.
- 15:40 A homogenization approach for characterization of the microscopic viscous-thermal effects in acoustic poroelastic materials by **K. Gao, H.V. Dommelen, P. Göransson, M. Geers**.
- 16:00 Inverse method to characterize 'local' and 'non-local' absorbing materials submitted to a shear grazing flow by **F. Simon, O. Berengue Llonch, E. Piot**.
- 16:20 Mechanical characterisation of acoustic foams: fractional derivatives approach by **S. Sahraoui, X. Guo, G. Yan, D. Parmentier**.

Experimental Methods for porous materials (0.7 Lisbon)

- 16:40 In-situ sound absorption of ground surfaces: Innovative processing and characterization methods by **J. Cuenca, L. De Ryck**.
- 17:00 Silicone foams for sound absorption: on the link between elaboration parameters and acoustic performances by **A. Abbad, S. Mith, M. Ouisse, N. Dauchez**.
- 17:20 Food product characterization by acoustical techniques by **F.-X. Bécot, M. Gauthier, F. Chevillotte, L. Jaouen**.
- 17:40 Investigations of an impedance tube technique to determine the transmission loss of materials under angular incidence by **E. Sadoulet-Reboul, M. Le Bourles, K. Verdière, M. Ouisse, O. Doutres, R. Panneton**.
- 18:00 Inverse estimation of the elastic and anelastic properties of anisotropic foams - study of the static/dynamic separation by **J. Cuenca, C. Van Der Kelen, P. Göransson**.

Microphone arrays and sound visualization: Methods and applications (0.8 Rome)

- 8:40 Experimental Assessment of a Single-layer Near-field Acoustic Holography Method in an Enclosed Space by **E. Zea, I. Lopez Arteaga**.
- 9:00 Direct acoustic vector field mapping: new scanning tools for measuring 3D sound intensity in 3D space by **D. Fernandez Comesaña, S. Steltenpool, E. Tijs, M. Korbasiewicz**.
- 9:20 Transient Acoustic Analysis of a motor run-up in a vehicle using a modular 4096 channel MEMS Microphone Array by **W. Ouwens, M. Camp, R. Scholte**.
- 9:40 iPTF methods: How Green's identity and FEM solver can be used for acoustic inverse methods by **N. Totaro, S. Forget, J.-L. Guyader**.
- 10:20 Design of 3D microphone arrays using automatic speech recognition and psychoacoustic evaluation for immersive sounds by **H. Lim, H.S. Jang, J.Y. Jeon**.
- 10:40 Plate mode identification using modal analysis based on microphone array measurements by **A. Van Velsen, E. Moers, I. Lopez-Arteaga, H. Nijmeijer**.
- 11:00 Application of MEMS microphone array for acoustic holography by **Z. Havranek, P. Benes, S. Klusacek**.
- 11:20 Sparse acoustic imaging with a spherical array by **E. Fernandez-Grande, A. Xenaki**.

Underwater Noise, Imaging and Communication (0.8 Rome)

- 13:40 Measurements of underwater conductor hammering noise: compliance with the German UBA limit and relevance to the harbour porpoise (*Phocoena phocoena*) by **J. Jiang, V. Todd, J.C. Gardiner, I. Todd.**
- 14:00 Real-time underwater abrasive water jet cutting process control by **S.D. Debruyne, D. Vandepitte, K. Van Massenhove.**
- 14:20 Combining installation challenges with noise challenges by **H. Van Vesseem.**
- 14:40 Separating Propeller Cavitation Noise and Cavitation Tunnel System Noise using Blind Source Separation(BSS) by **E. Widjiati, E.B. Djatmiko, W. Wardhana, W. Wirawan.**
- 15:00 Modeling of seismic exploration noise reduction in the Marginal Ice Zone by **D. Tollefsen, E.M. Dombestein, H. Sagen.**
- 15:20 On the use of ship radiated noise to determine statistical information on geoacoustic structure in shallow water by **D. Knobles.**
- 15:40 Bayesian Ambient-Noise Inversion by **S. Dosso.**
- 16:00 De-noising procedures for inverting underwater acoustic signals in applications of acoustical oceanography by **M. Taroudakis, C. Smaragdakis.**

Designing outdoor ground for noise reduction (0.8 Rome)

- 16:20 Outdoor Ground Impedance Models by **K. Attenborough.**
- 16:40 Determination of the Impedance of Vegetated Roofs with a Double- Layer Miki Model by **C. Liu, M. Hornikx.**
- 17:00 Ground Effect due to Periodic Resonant Roughness by **H.-C. Shin, S. Taherzadeh, K. Attenborough.**
- 17:20 Sound propagation above periodic & aperiodic rough surfaces by **S. Taherzadeh.**

Acoustics in schools (0.9 Athens)

- 8:40 Experimental investigation of the combination of absorptive and diffusing treatments in classrooms by **Y.-J. Choi.**
- 9:00 The Challenge of Meeting both Acoustic and Thermal Comfort in 21st Century School Classrooms by **C. Campbell, H. Brokmann, E. Nilsson.**
- 9:20 Clarity & Strength in non-diffuse fields: comparison with diffuse field models by **J. Harvie-Clark, F. Larrieu, N. Dobinson, D. Wallace.**
- 9:40 A Comparative Study on Indoor Sound Quality of the Practice Rooms upon Classical Singing Trainees' Preference by **Ö. Sinal, S. Yilmazer.**
- 10:00 Local variations of speaker-oriented acoustic parameters in typical classrooms: a simulation study by **D. Pelegrin Garcia, M. Rychtáriková, C. Glorieux.**
- 10:20 Acoustics - Loading of teachers and children by **E. Sala, L.M. Rantala, S. Hakala, S. Holmqvist.**
- 10:40 Assessment of indoor ambient noise level in school classrooms by **G.E. Puglisi, L.C. Cantor Cutiva, A. Astolfi, A. Carullo.**
- 11:00 Talking, Teaching, and Listening: Teachers' response to acoustic environments by **E. Hunter, T. Leishman.**
- 11:20 The index method of acoustic design of sports enclosures by **E. Nowicka.**
- 11:40 Speech intelligibility in Swedish forests by **J. Christensson.**

Open plan offices (0.9 Athens)

- 13:40 Acoustic of open spaces - toward a new French standard by **Y. Le Muet, P. Chevret.**
- 14:00 Effect of Variation in Noise Absorption in Open-plan Office: a Field Study with a Cross-Over Design by **F. Davidsson.**

- 14:20 Defining the acoustic environment of (semi-)open plan offices subtitle: Acoustic measurements leading to activity based design for retrofit buildings by **S. Vellenga-Persoon, T. Hongens.**
- 14:40 Background noise level to determine the speech privacy in open plan offices by **T. Vervoort.**
- 15:00 Speech security outside meeting rooms by **C. Hopkins, M. Robinson, K. Worrall, T. Jackson.**
- 15:20 Spatial decay rate of speech in open plan offices: the use of $D_{2,S}$ and $L_{p,A,S,4m}$ as building requirements by **R. Wenmaekers, C. Hak.**
- 15:40 Prediction of spatial decay of speech in open-plan offices conforming ISO 3382-3 principles by **V. Hongisto, J. Keränen.**

Sound exposure of musicians (0.9 Athens)

- 16:00 Sound levels and balance of Self, Others and Reverb: Their potential influence on orchestra musicians by **M. Skålevik.**
- 16:20 Noise exposure of musicians: the own instrument's sound compared to the sound from others by **R. Wenmaekers, C. Hak.**
- 16:40 Sound exposure of musicians and music induced hearing loss by **S. Dance.**

Universal design and acoustics in public buildings (0.9 Athens)

- 17:00 The Design of the Multifunctional Concert Hall of the Academy of Music in Zagreb by **M. Horvat, H. Domitrovic, K. Jambrosic.**
- 17:20 Room acoustic aspects of some recently opened pop venues by **M. Lautenbach, M. Luykx.**
- 17:40 Ambiances In Station - The Role Played By Acoustics by **C. Gallais, T. Guillaume, P.E. Gautier.**
- 18:00 The use of textile membranes in architectural acoustics: An overview by **V. Chmelík, D. Urbán, M. Rychtáriková.**

Posters, part 1 14:00 - 15:00 (Lobby)

- Modeling and Validation Processes of an Electric Vehicle with Statistical Energy Analysis by **A. Botke, E. Erensoy, D. Yazgac, C. Sevginer.**
- Computer modelling and on-site investigation of noise barriers with complementary noise reduction element by **M. Bíte, D.S. Nagy, P.Z. Bíte, I. Dombi.**
- Detection of Wind Turbine Noise in Immission Measurements by **B. Fauville, F. Moiny.**
- Comparison of a finite element approach and an analytic solution describing the sound pressure fields in two coupled rooms at the low frequency sound spectrum within a parametric study by **M. Neusser, H. Konder, T. Bednar.**
- Smart Soundmeter for Shooting Noise Monitoring by **A.-C. Witsel, F. Moiny.**
- Optimization of the Measurement System for Determination of the Diffusion and Reflection Coefficients by **L. Zuzjak, J. Karel, O. Tureček.**
- Excitation of a Single Cut-on Mode by Means of a Plane Mode- synthesiser Composed of Several Point Sources – Theory and Experiment by **A. Snakowska, L. Gorazd, J. Jurkiewicz, K. Kolber, A. Flach.**
- A Framework for Road Traffic Noise Auralisation by **A. Southern, D. Murphy.**
- The Selection of the Microphones for Diffusion Measurement Method by **J. Karel, O. Tureček, L. Zuzjak.**
- Effective sound absorption of acoustic panels in a diffuse and non-diffused sound field by **J. Zrneková, P. Zaťko, M. Rychtáriková.**

Posters, part 2 15:00 - 16:00 (Lobby)

- The Heliophone by **N.B. Roozen, A. Jacobs, M. Rychtáriková, C. Glorieux.**
- The visual effect combined with audible noise of wind turbine and its related EEG reaction by **M. He, D. Krahé.**
- Software quality testing for calculation of outdoor noise by **I. Tsukernikov, I. Shubin, L. Tichomirov, T. Nevenchannaya.**
- Comparison of force and moment behavior of bimorph actuator by **O. Jiricek, V. Jandak, M. Brothanek.**
- Noise Induced Hearing Loss: a systematic review by **A. Oliveira, A. Miguel, J. Baptista, J. Costa.**
- Measurements on active earplugs and effect of ear canal resonances on spectral balance by **T. Lokki, I. Huhtakallio.**
- A Case Study on Public Noise Annoyance in Relation to Research Trends on Noise Pollution by **N. Akbulut Çoban, K. Gedik, S. Kaya.**
- Analysis of the Acoustic Conditions in the Student Restaurant by **L. Zelem, D. Urbán, V. Chmelík, M. Rychtáriková.**
- Modeling Speech Production in Noise for the Assessment of Vocal Effort for Use with Communication Headsets by **R. Bouserhal, J. Voix, T. Falk.**

Posters, part 3 16:00 – 17:00 (Lobby)

- Combining thermally activated cooling technology (TABS) and high acoustic demand: Acoustic and thermal results from field measurements part II by **Y. Le Muet, P. Lombard.**
- Influence of the Openings Size on Acoustic Quality of Naturally Ventilated Classrooms by **M. Oiticica, J. Silva.**
- A qualitative study of annoyance caused by floor impact sounds in apartment buildings by **S.H. Park, P.J. Lee.**
- Increasing annoyance due to noise radiation of steel bridges and their joints by **C. Tollenaar, E. De Graaff.**
- Residents Autonomy to Solve the Chinese DAMA Square Dancing noise by **W. Zhang, Y. Zhou, W. Zhu.**
- Airborne sound insulation measurements using gunshot as an impulsive sound source by **F. Deželak, L. Čurović, M. Čudina.**
- Experimental study of sound attenuation by layers of water droplets by **I. Herrero-Durá, J. Zaragoza, R. Picó, V. Sánchez-Morcillo, L.M. García-Raffi.**
- Active musician's hearing protection device for enhanced perceptual comfort by **A. Bernier, J. Voix.**
- An Experimental Study To Investigate Speech Intelligibility And Sound Quality In Elementary Schools by **Z. Savci Ozquven, N. Tamer Bayazit.**

Wednesday 3 June, 2015

Acoustic regulations and classification schemes for buildings (Auditorium 2)

- 8:40 New ways of lumped parameter analysis in an enclosed environment by **C. Van Dijk**.
- 9:00 New Dutch Code of Practice for equipment noise by **W. Beentjes**.
- 9:20 Measurement of time variant sound pressure levels at low frequencies in buildings - verification of sound class using EN ISO 10052 and 16032 by **C. Simmons, K. Larsson**.
- 9:40 Aku20 - Searching for Optimal Single Number Quantities in EN ISO 717 Correlating Field Measurements 20-5000 Hz to Occupant's Ratings by **C. Simmons, F. Ljunggren**.
- 10:20 Airborne Sound Insulation of Vertical Partitions in an Apartment in Maceó-AL-Brazil by **R.C. Teixeira Penedo, M. Oiticica**.
- 10:40 Satisfaction with sound insulation in residential dwellings – concrete walls vs. drywalls by **V. Hongisto, M. Suokas**.
- 11:00 Noise Requirements in Existing Buildings in Spain: New Proposals and the Existing Building Evaluation Report by **T. Carrascal García, A. Romero Fernández, B. Casla Herguedas**.
- 11:20 Neighbour and traffic noise annoyance at home – prevalence and trends among Danish adults by **B. Rasmussen, O. Ekholm**.
- 11:40 Evaluation method of rubber ball impact sound by **J. Jeong**.

Plenary lecture: Room Acoustics (Auditorium 2)

- 12:00 Plenary Lecture: The Acoustics of Places for Social Gatherings by **J.H. Rindel**.

Airborne and Impact sound transmission - prediction methods (Auditorium 2)

- 14:00 Vibroacoustic Investigations of Light-Weight Ceilings - Modeling Aspects and Design Guidelines by **M. Buchschmid, M. Kohrmann, G. Müller, U. Schanda**.
- 14:20 Comparison between calculated and measured performances of impact sound insulation for Cross Laminated Timber building elements by **C.C. Mastino, M. Marini, R. Baccoli, A. Di Bella, E. Solinas, N. Trulli**.
- 14:40 Efficient and robust coupling of finite element and diffuse field models for sound transmission prediction by **E. Reynders**.
- 15:00 Apparent Airborne Sound Insulation of Hybrid Wood-Concrete Masonry Assemblies by **C. Höller, B. Zeitler, J. Mahn, I. Sabourin, S. Schoenwald**.
- 15:20 Acoustic Evaluation of Floating Floor Applications in Mechanical Rooms by **M. Oguc, D. Hadzikurtes**.
- 16:00 Noise from Waste Water Pipes above a Suspended Ceiling by **T. Scheers, M. Vercammen**.
- 16:20 Wave Based Modeling of Structure-Borne Sound Transmission in Finite Sized Double Walls by **A. Dijckmans**.
- 16:40 Sound insulation of heavyweight walls with linings and additional layers: numerical investigation by **A. Santoni, P. Bonfiglio, P. Fausti, N. Zuccherini Martello**.
- 17:00 Sound propagation within a double skin facade and its influence on the speech privacy in offices by **D. Urbán, M. Rychtáriková, P. Tomašovič, N.B. Roozen, C. Glorieux**.

Railway noise: sources, exterior noise and ambience (0.1 London)

- 8:40 Acoustical Source Modelling for Rolling Stock Vehicles: the Modeller's Point of View by **A. Bistagnino, G. Squicciarini, U. Orrenius, E. Bongini, M. Starnberg, R. Cordero, J. Sapena, D. Thompson**.
- 9:00 Aeroacoustic Analysis of a NACA Duct by **N. Pignier, J. Dahan, C. O'Reilly, S. Boij**.
- 9:20 Research on noise propagation of plateau railway by **L. Shao, L. Liu, Y. Li, C. He**.
- 9:40 Quiet Track - Monitoring of track roughness and track decay rate by **M. Höjer, M.**

Almgren.

- 10:20 Assessment of Noise Source Integration Effects within a Virtual Certification Process by **B. Betgen, U. Orrenius, S. Brunström.**
- 10:40 On the Prediction of Track Decay Rates using Finite Element Models by **B. Betgen, G. Squicciarini, D. Thompson.**
- 11:00 Reduction of Impact Noise of Trams on a Major Bridge by **M. Ditrlich, C. Bosschaart, P. Wessels.**
- 11:20 Portraying Sounds Using a Morphological Lexicon by **M. Carron, T. Rotureau, F. Dubois, N. Misdariis, P. Susini.**
- 11:40 Effects of Railway Ballast on the Sound Radiation From the Sleepers by **X. Zhang, D. Thompson, G. Squicciarini.**
- 13:40 Rail vehicle source models within a virtual certification process by **U. Orrenius, L. Feng, M. Åbom.**
- 14:00 Effective abatement of railway noise in Germany by **R. Weinandy, T. Myck.**
- 14:20 Noise prediction of a steel-concrete railway bridge using a FEM by **J. Oostdijk, T. Weekenstroom, M. Vercammen.**
- 14:40 Characteristics of rail pads tested at laboratory and under track conditions by **H. Venghaus, M. Toward, E. Scossa-Romano.**
- 15:00 Virtual testing within acoustic certification of rolling stock: challenges to be met in the future by **E. Bongini, U. Orrenius, M. Starnberg, A. Bistagnino.**

Developments in standards and policies for railway noise (0.1 London)

- 15:40 Working with noise production ceilings for railway traffic by **C. Roovers.**
- 16:00 Research Study: Managing Noise from Parked Trains by **N. Isert, S. Lutzenberger, N. Craven, P. Hübner.**
- 16:20 Acoustic Specification of Composite Brake-Blocks for Railway vehicles by **F. Letourneaux, F. Aubin.**
- 16:40 Application of European Noise Legislation in Rolling Stock Projects World-Wide by **S. Leth, U. Orrenius, L. Baures, B. Stegemann, G. Plessis, S. Lottiaux, S. Burdis, A. Carter.**
- 17:00 Ten years of rail roughness control in the Netherlands – Lessons learned by **W. Schwanen, A. Kuijpers, J. Torbijn.**

Tyre/road noise measurements, standards and classification (0.2 Berlin)

- 8:40 On the acoustic long-term performance of asphalt and concrete road surfaces on Austrian motorways by **R. Wehr, M. Conter.**
- 9:00 A psychoacoustic based approach to pavement classification by **E. Freitas, C. Cunha, J. Lamas, S. Mouta, J. Santos.**
- 9:20 Development of a High-Resolution Measurement System of Rotating Tires towards Noise Prediction by **K. Takami, T. Furukawa.**
- 9:40 Improved method for determining the absorption coefficient of high reflective surfaces by **W. Schwanen, G. Van Blokland.**
- 10:00 Three Approaches to Study the Reduction of Pavement Noise Performances over Time by **F. Anfosso Ledee.**
- 10:40 Measurement of noise from electrical vehicles and internal combustion engine vehicles under urban driving conditions by **L.M. Iversen, R.S.H. Skov.**
- 11:00 Noise properties of there constructed highway D1 measured by CPX open trailer and stability of measured data in time and distance by **V. Krivanek, A. Pavkova.**
- 11:20 Integration of noise in Pavement Management Systems by **H. Bendtsen, R. Stahlfest Holck Skov, L. Møller Iversen.**
- 11:40 30 Different Tyres On 4 Surface Types - How Do Truck Tyre Noise Levels Relate to the Test Surface by **G. Van Blokland, J. Kragh.**

Perception and Assessment of Sound Quality (0.2 Berlin)

- 14:00 Decision strategies in loudness judgments of time-varying sounds inferred from two psychophysical tasks by **E. Ponsot, P. Susini, S. Meunier**.
- 14:20 Sound Quality Evaluation of Acoustical Environments with Multiple Sources by **S. Skoda, J. Steffens, J. Becker-Schweitzer**.
- 14:40 Does the order of different successive vehicle pass-bys have an influence on the annoyance due to urban road traffic noise? by **L.-A. Gille, C. Marquis-Favre**.
- 15:00 Influence of Context Effects on Sound Quality Assessments by **A. Fiebig**.
- 15:40 Perceptual evaluation of differences between original and synthesised musical instrument sounds by **A. Osses, C. Kim, A. Kohlrausch**.
- 16:00 Psychoacoustic filtering for noisy speech enhancement by **S. Alaya, N. Zoghlami, Z. Lachiri**.
- 16:20 Psychoacoustic Evaluation of Rock Crushing Plant Noise by **J. Kataja, M. Antila, H. Isoemoisio, J. Heikkilä, A. Karjalainen**.

Fans, ducts and mufflers (0.3 Copenhagen)

- 8:40 Application of a High-Order FEM Solver to Aeroengine Exhaust Noise Radiation by **K. Hamiche, G. Gabard, H. Bériot**.
- 9:00 An uncertainty estimation for a higher order multi-port characterization in ducts with flow by **S. Sack, M. Åbom**.
- 9:20 The effect of cylindrical waveguide outlet features on the directional pattern by **K. Kolber, L. Gorazd, A. Snakowska, J. Snakowski**.
- 9:40 Multimodal Method for Flow-induced Acoustic Resonance in Successive Deep Axisymmetric Cavities in a Duct by **X. Dai, Y. Aurégan**.
- 10:00 Liner Impedance Determination from PIV Acoustic Measurements by **A. Alomar, Y. Aurégan**.
- 10:20 Acoustic characterisation of double-orifice configurations by means of a LES-SI approach by **C. Sovardi, W. Polifke**.
- 11:00 Hybrid Dissipative/Reactive Silencer Predictions with Comparison to Measurement by **P. Williams, M. Åbom, J. Hill, R. Kirby, C. Malecki**.
- 11:20 Acoustic damping of an annular tail-pipe under mean flow conditions by **R. Boonen, P. Sas, E. Vandenbulck**.
- 11:40 Low Frequency Noise Attenuation inside Ducts using locally resonant periodic flush mounted Steel Patches by **M. Farooqui, T. Elnady, W. Akl**.
- 14:00 The Effect of High Temperatures and Grazing Flow on the Acoustic Properties of Liners by **H. Bodén, R. Kabral**.
- 14:20 A reaction matrix method in waveguides with coupling resonances by **L. Xiong, W. Bi, Y. Aurégan**.
- 14:40 Identification of a Rotating Sound Source in a Duct with High Spatial Resolution by **Y.-H. Heo, J.-G. Ih, H. Bodén**.
- 15:00 Reduction of Tonal Noise in a Centrifugal Fan using Guide Vanes by **K. Paramasivam, S. Rajoo, A. Romagnoli**.
- 15:40 Acoustic characterization of a multicavity muffler for broadband noise reduction in flow duct applications by **E. Perrey-Debain, R. Maréchal, B. Ouédraogo, J.-M. Ville**.
- 16:00 Prediction of Air Flow Noise in Ducts due to the Presence of Fixed Obstacles by **N. Papaxanthos, E. Perrey-Debain, S. Bennouna, B. Ouédraogo, S. Moreau, J.-M. Ville, F. Foucart**.
- 16:20 Evaluation of Three Impedance Eduction Methods for Acoustic Liners Under Grazing Flow by **A. Amador Medeiros, J. Apolinário Cordioli**.

Hearing protectors - new developments (0.4 Brussels)

- 8:40 Determination of Sound Attenuation of Ear-plugs Using Audiometers by **S. Dantscher**.
- 9:00 Special Methods for Selecting Hearing Protectors for Very Low Frequency Noise by **P. Sickert**.
- 9:20 Degradation of Front-Back Spectral Cues Induced by Tactical Communication and Protective Systems by **T. Joubaud, V. Zimpfer, A. Garcia, C. Langrenne**.
- 9:40 Very high level impulse noises and hearing protection by **P. Hamery, V. Zimpfer, K. Buck**.
- 10:00 Assessment of otoacoustic emission probe fit at the workforce using integrated calibration procedure by **V. Nadon, A. Bockstael, J. Voix, D. Botteldooren**.
- 10:20 The impact in the workplace of hearing protector standards development by **E. Shanks**.
- 10:40 Modeling the interaction between the hearing protector attenuation function and the hearing loss profile on sound detection in noise by **C. Giguère, E.H. Berger**.
- 11:00 Systematic Evaluation of the Relationship Between Subjective and Objective Measurement Methods of Hearing Protector Devices Attenuation by **H. Nélisse, C. Le Cocq, J. Boutin, J. Voix, F. Laville**.
- 11:20 A Web App for Avoidance of Hazards Arising from Combinations of Personal Protective Equipment - Measurements on Reduction of Sound Attenuation of Ear Muffs by Goggle Sidepieces by **M. Liedtke, B. Hohmann**.
- 11:40 Standardized acoustic test fixtures for testing ear protection devices and noise cancelling headsets by **P. Wulf-Andersen**.

TUTORIALS: FP7 Marie Curie ITN project TANGO, Thermoacoustic and Aeroacoustic Nonlinearities in Green combustors with Orifice structures (0.4 Brussels)

- Overview of TANGO - Thermoacoustic and aeroacoustic nonlinearities in green combustors with orifice structures by ***Maria Heckl***
- Linearized Navier-Stokes solvers for in-duct aero-acoustics by ***Gunilla Efrainsson***
- 14:00 Source models in linearized approaches to computational aeroacoustics by ***Paula Martínez***
- 16:00 Acoustic wave propagation through orifices in ducts by ***Susann Boij***
- Acoustic absorption of micro-perforated plates (MPP) by ***Ines Lopez***
- Thermo-acoustic instabilities in combustors by ***Maria Heckl***

Analysis and Modelling of Psychoacoustics Sensations (0.6 Madrid)

- 8:40 Assessment of kindergarten noise by means of psychoacoustic metrics by **J. Rennies, D. Hülmeier, F.X. Nsabimana**.
- 9:00 Tonality perception of stationary and transient signals by **A. Oetjen, P. Volk, S. Van De Par**.
- 9:20 Loudness perception and modeling of impulsive sounds by **R. Sottek, T. Moll**.
- 9:40 Spectral and Temporal Features as Estimators of the Irrelevant Speech Effect by **T.U. Senan, R. Navarro, M. Park, S. Jelfs, A. Kohlrausch**.
- 10:00 Loudness of time-varying environmental sounds: Still a challenge for current loudness models? by **J.L. Verhey, J. Hots, J. Rennies**.

The effects of natural scenery on sound perception (0.6 Madrid)

- 10:40 Soundscape quality of urban parks and gardens by **J. Lafon, C. Lavandier**.
- 11:00 The Effects of "Greening" Urban Areas on the Perceptions of Tranquillity by **G. Watts, R. Pheasant**.
- 11:20 The effect of outdoor vegetation as seen from the dwelling's window on self-reported noise annoyance by **T. Van Renterghem, D. Botteldooren**.
- 11:40 Effects of soundscape on rural landscape perception by **X. Ren, J. Kang**.

Soundscape case studies (0.6 Madrid)

- 13:40 Soundscapes, human restoration and quality of life by **I. Van Kamp, R. Klæboe, A. Brown, P. Lercher.**
- 14:00 Healing soundscape: hospital acoustics 2.0 by **E. De Ruiter.**
- 14:20 Noise as a Stress Factor on Humans in Urban Environments in Summer and Winter by **J. Stienen, T. Schmidt, B. Paas, M. Ziefle, J. Fels.**
- 14:40 Vibrations from Blasting Activities Annoyance reactions from residents in neighbouring areas by **K. Ronny, A. Amundsen.**
- 15:00 The Influence of Social Context on the Perception of Student's Noise in the City of Groningen: A Qualitative Analysis by **K. Minoura, C. Driesprong, K. Profijt, K. McGee, T. Andringa.**
- 15:20 Investigating the Effect of Indoor Soundscaping on Speech Privacy in Open Offices by **V. Acun, S. Yilmazer.**
- 15:40 Sound in the museum by **K. Hjortkjær.**

Soundscape Ecology (0.6 Madrid)

- 16:20 Soundscape Analysis and Wildlife Presence in the Vicinity of a Wind Turbine by **J. Florentin, B. Fauville, M. Gérard, F. Moiny, P. Rasmont, G. Kouroussis, O. Verlinden.**
- 16:40 Acoustic management of Natural Parks: experience in Armañón Park by **I. Garcia Perez, A. Santander, I. Diez, P. Fernandez Alcala, L. Gutierrez, I. Aspuru.**

Active noise control (0.7 Lisbon)

- 8:40 Simultaneous Online Modeling of the Secondary Path and Neutralization of the Feedback Path in an Active Noise Control System by **W. Reich, S. Khan, M. Dalir, R. Hilterhaus.**
- 9:00 Multichannel Active Sound Quality Control for Independent- Channel Sound Profiling by **J.A. Mosquera Sanchez, K. Janssens, W. Desmet, L. De Oliveira.**
- 9:20 Active noise control with fast array recursive least squares filters using a parallel implementation for numerical stability by **A. Berkhoff, S. Van Ophem.**
- 9:40 The spatial properties and local active control of road noise by **S. Elliott, W. Jung, J. Cheer.**
- 10:00 Recent advances in active noise and vibration control by **T. Bein, D. Mayer, S. Herold.**
- 10:20 The Real-Time Performance of a Two-Dimensional ANC Barrier using a DSP and Common Audio Equipment by **C. Kleinhenrich, T. Weigler, D. Krahé.**

Vehicle Sound Quality (0.7 Lisbon)

- 10:40 Engine Sound Weighting using a Psychoacoustic Criterion based on Auralized Numerical Simulations by **F. Duvigneau, S. Liefold, M. Höchstetter, J.L. Verhey, U. Gabbert.**
- 11:00 Predicting the perceived Quality of impulsive Vehicle sounds by **M. Höchstetter, J.-M. Sautter, J.L. Verhey, U. Gabbert.**
- 11:20 There's a car coming? - Psychometric function for car pass-by in background noise based on simulated data by **A. Hoffmann, P. Bergman, W. Kropp.**
- 11:40 Analysis of vibrational comfort in a car equipped with a modified 3-cylinders engine by **A. Carbajo, V. Roussarie, E. Parizet, E. Diaz.**

Acoustic material design process: From microstructure to acoustics performance (0.7 Lisbon)

- 14:00 Unit-cell variability and micro-macro modeling of polyurethane acoustic foams by **O. Doutres, M. Ouisse, N. Atalla, M. Ichchou.**

- 14:20 On representativeness of the representative cells for the microstructure-based predictions of sound absorption in fibrous and porous media by **T.G. Zielinski**.
- 14:40 Linking Micro Structure to Sound Absorption: An Experimental Study on Lime Based Plasters by **I. Meric Nursal, A. Tavukcuoglu, M. Caliskan**.
- 15:00 Predicted and Measured Anisotropic Acoustic and Elastic Properties for Open Cell Porous Material and Their Influence on Acoustic Performance in Typical Train Applications by **E. Lundberg, P. Göransson, U. Orrenius, P. Wennhage**.
- 15:20 Atypical dynamics of materials with periodic microstructure and local resonance by **S. Hans, C. Boutin, C. Chesnais**.
- 15:40 Sound Absorption Measurements for Micro Perforated Plates: The Effect of Edge Profile by **M.A. Temiz, I. Lopez-Arteaga, A. Hirschberg**.

Uncertainty of measurements (0.8 Rome)

- 8:40 How 21st century technology can improve sound level measurement by **M. Turner**.
- 9:00 Multi-Layer Planar Near Field Holography using MEMS microphone arrays in a noisy environment by **M. Thomassen, H. Nijmeijer, R. Scholte, P. Sommen**.
- 9:20 The influence of finite sample size on surface impedance determination of materials with low sound absorption at low frequencies by **A. Färm, S. Boij, R. Glav**.

Sound sensor networks and smart cities (0.8 Rome)

- 9:40 Utilising the Strengths of Different Sound Sensor Networks in Smart City Noise Management by **D. Manvell**.
- 10:00 An innovative approach for long-term environmental noise measurement: RUMEUR network in the Paris region by **F. Mietlicki, C. Mietlicki, M. Sineau**.
- 10:20 Barcelona noise monitoring network by **J. Camps**.
- 11:00 Sound Sensor Network based Assessment of Traffic, Noise, and Air Pollution by **L. Dekoninck, D. Botteldooren, L. Int Panis**.
- 11:20 On the Use of Linear Regression for the Assessment of Stability in Noise Monitoring Networks: A Practical Example by **K. Sotirakopoulos**.
- 11:40 Real Life Harmonic Source Localization using a Network of Acoustic Vector Sensors by **D. Pérez Cabo, H.E. De Bree, M.A. Sobreira Seoane, D. Fernandez Comesaña**.
- 13:40 Dynamic Noise Mapping based on Fixed and Mobile Sound Measurements by **B. De Coenseel, K. Sun, W. Wei, T. Van Renterghem, M. Sineau, C. Ribeiro, A. Can, C. Lavandier, D. Botteldooren**.
- 14:00 The Design and Calibration of Low Cost Urban Acoustic Sensing Devices by **C. Mydlarz**.
- 14:20 Area-based environmental noise measurements using wireless sensor network by **I. Kivelä, I. Hakala**.

European noise policies (0.8 Rome)

- 14:40 WHO Environmental noise guidelines for the European Region by **M.-E. Heroux, W. Babisch, G. Belojevic, M. Brink, S. Janssen, P. Lercher, M. Paviotti, G. Pershagen, K. Persson Wayne, A. Preis, S. Stansfeld, M. Van Den Berg, J. Verbeek**.
- 15:00 Towards an complete Health Impact Assessment for Noise in Europe by **A. Van Beek, D. Houthuijs, W. Swart, E. Van Kempen, N. Blanes Guàrdia, F. De Leeuw, J. Fons**.
- 15:20 Bearable railway noise limits in Europe by **F. Elbers, E. Verheijen**.
- 16:00 Triple A Tyres for Cost-effective Noise Reduction in Europe by **M. Dittrich, F. De Roo, S. Van Zyl, S. Jansen, E. De Graaff, J. Sliggers**.
- 16:20 Future environmental noise impact for road and rail by **M. Dittrich, F. De Roo, A. Eisses**.
- 16:40 Declaration on Better Tyres by **H. Wolfert, J. Sliggers**.

17:00 Environmental Noise Policy: ways out of the crisis by **P. De Vos**.

Room in room acoustics (0.9 Athens)

- 8:40 Evaluation of a perceptually optimized room-in-room reproduction method for playback room compensation by **J. Grosse, S. Van De Par**.
- 9:00 Spectral and perceptual properties of a transfer chain of two rooms by **A. Haeussler, S. Van De Par**.
- 9:20 Analysis of a Spatially Discrete Sound Field Synthesis Array in a Reflective Environment by **V. Erbes, S. Weinzierl, S. Spors**.
- 9:40 Room in Room Acoustics: the Influence of the Direct/Diffuse Sound Field Ratio in a Listening Room on Played Back Recorded Acoustics by **C. Hak, R. Wenmaekers**.
- 10:00 Modelling the Group Size for Prediction of the Noise Level in Eating Establishments by **D. Svensson, J. Brunskog, C.-H. Jeong**.

Sonic Crystal Acoustic Barriers (0.9 Athens)

- 10:20 Noise Certification of a Sonic Crystal Acoustic Screen designed using a Triangular Lattice according to the Standards EN 1793(-1;-2;-3): 1997 by **J.V. Sánchez-Pérez, S. Castiñeira-Ibáñez, C. Rubio, V. Romero-García, L.M. García-Raffi**.
- 10:40 Experimental evidence of band gaps in periodic structures by **F. Morandi, S. De Cesaris, M. Miniaci, A. Marzani, M. Garai**.
- 11:00 Towards the development of a software to design acoustic barriers based on Sonic Crystals: An overlapping model by **J.V. Sánchez-Pérez, S. Castiñeira-Ibáñez, C. Rubio**.
- 11:20 The 2.5D MST for sound propagation through arrays of cylinders parallel to the ground by **B. Van Der Aa, J. Forsén**.
- 11:40 The Sonic Window Project - Meeting the Trio Challenges of Providing Natural Ventilation, Daylight and Noise Mitigation by **H.P. Lee, L.B. Tan, K.M. Lim, K.M. Lim, N.C. Khoo**.

Sensitivity of humans for low frequency noise (0.9 Athens)

- 14:00 Auditory Cortex Activation by Infrasonic and Low-frequency Sound of Equalized Individual Loudness by **R. Kühler, M. Bauer, J. Hensel, T. Sander-Thömmes**.
- 14:20 Trials of a protocol to support LFN sufferers in the UK by **A. Moorhouse, D. Baguley, T. Husband, C. Banks, P. Comiskey, T. Kay, A. Kenyon, D. McFerran, F. Penney, K. Smith, C. Whalley**.

Methods to evaluate and mitigate low frequency noise (0.9 Athens)

- 14:40 Localisation of low frequency noise pollution areas in industrial environments by **J. Van Muijlwijk, L. Garcia Escribano, E. Jansen**.
- 15:00 Social assessment of environmental lfn by **P. Sloven**.
- 15:20 Municipal approach of low frequency noise (LFN) by **N. De Jong, G. De Meer, W. Reen, G. Hooiring, H. Breukelaar**.
- 15:40 Assessment of low frequency noise due to wind turbines in relation to low frequency background noise by **E. De Beer**.
- 16:20 Low Frequency Noise: Figures, Facts and Myths. Results of a discourse between different stakeholders by **R. Van Poll, I. Van Kamp**.
- 16:40 Clinical Protocol for Evaluating Pathology Induced by Low Frequency Noise Exposure by **M. Alves-Pereira, N. Castelo Branco**.
- 17:00 Low Frequency Noise-Induced Pathology: Contributions provided by the Portuguese Wind Turbine Case by **N. Castelo Branco, M. Alves-Pereira**.

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