



**19<sup>th</sup>**  
**INTERNATIONAL**  
**CONGRESS ON**  
**ACOUSTICS**

# CONGRESS PROGRAMME AND ABSTRACTS



**INTERNATIONAL TECHNICAL EXHIBITION OF PRODUCTS  
AND SERVICES ON ACOUSTICS AND VIBRATIONS**



International Commission for Acoustics



Sociedad Española de Acústica



Instituto de Acústica -CSIC-



EL JEFE DE LA CASA DE  
S. M. EL REY

SC  
170/07

S.M. el Rey, accediendo a la petición que tan amablemente Le ha sido formulada, ha tenido a bien aceptar la

### **PRESIDENCIA DE HONOR**

del **"19<sup>th</sup> INTERNATIONAL CONGRESS ON ACOUSTICS"** que, bajo el lema **«Acoustics for the 21<sup>st</sup> Century»**, tendrá lugar en Madrid del 2 al 7 de septiembre próximo.

Lo que me complace participarle para su conocimiento y efectos.

PALACIO DE LA ZARZUELA, 26 de abril de 2007

EL JEFE DE LA CASA DE S.M. EL REY,

SR. PRESIDENTE DEL COMITÉ ORGANIZADOR

MADRID



*Virgili*



38º Congreso Nacional de Acústica  
y Encuentro Ibérico de Acústica

38º Congresso Nacional de Acústica  
e Encontro Iberico de Acústica

38th Spanish National Congress on Acoustics  
and Iberian Meeting on Acoustics

Jointly with ICA 2007 MADRID



Sociedad Española de Acústica



Sociedad Española de Acústica

# Welcome to ICA2007MADRID

The International Congresses on Acoustics are held every three years under the auspices of the International Commission for Acoustics. These series of conferences have already a long history since they started in 1953.

In 1977, the 9th International Congress on Acoustics was held in Madrid. Thirty years later the Spanish acousticians are very pleased to host once again the biggest world meeting in acoustics.

The 19th ICA2007MADRID is jointly organised by the Spanish Acoustical Society (SEA) and the Institute of Acoustics (IA) of the Spanish Higher Council for Scientific Research (CSIC).

The number of invited and contributed papers of all branches of acoustics presented at the Congress are over 1300 from authors of more than 50 countries. The Congress programme also includes five Plenary Lectures given by selected renowned speakers.

An international technical exhibition of products and services on Acoustics and Vibrations, EXPOACUSTICA® 2007 MADRID, will be held from 3rd to 7th September at the Congress Venue.

Also, jointly with ICA2007MADRID the 38th Spanish National Congress on Acoustics and Iberian Encounter on Acoustics will take place.

In addition, to the general programme, lasting from the 2nd to the 7th September 2007, two satellite symposia will be held, respectively, in Barcelona, the International Symposium on Musical Acoustics, ISMA2007, and in Sevilla the International Symposium on Room Acoustics, ISRA2007.

The Organizing Committee of the ICA2007 Madrid, on behalf of all the Spanish acousticians welcome all colleagues from all over the world and hope to offer them an adequate platform for fruitful scientific and technical exchanges and an enjoyable stay in Spain.

The Organizing Committee

# 19th INTERNATIONAL CONGRESS ON ACOUSTICS ICA2007MADRID

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    - BIO - Bioacoustics
    - CAS - Communication Acoustics, including Speech
    - COM - Computational Acoustics
    - ELE - Electro-acoustics and Audio Engineering
    - ENV - Environmental Acoustics
    - MUS - Musical Acoustics
    - NLA - Non-linear Acoustics
    - NOI - Noise
    - PHY- Physical Acoustics
    - PPA - Physiological and Psychological Acoustics
    - RBA - Room and Building Acoustics
    - SAV - Structural Acoustics and Vibration
    - ULT - Ultrasonics
    - UNW -Underwater Acoustics
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## **PRESIDENT OF HONOUR**

His Majesty the King of Spain

### **1. Committees and Organizing Institutions**

#### **1.1. Committee of Honour**

The President of the Community of Madrid  
The Minister of Public Works  
The Minister of Education and Science  
The Minister of Culture  
The Minister of Health and Consumer Affairs  
The Minister of Environment  
The Minister of Housing  
The Major of Madrid  
The President of the Consejo Superior de Investigaciones Científicas  
The Dean of the Colegio Oficial de Ingenieros Técnicos de Telecomunicación

#### **1.2. International Advisory Committee**

Fülop Agucztnovizc - Hungary	William A. Kuperman - U.S.A.
Adriano Alippi - Italy	Sonoko Kuwano - Japan
Ewald Benes - Austria	Zyunti Maekawa - Japan
Phillipe Blanc-Benon - France	Luigi Maffei - Italy
Jens Blauert - Germany	Pedro Martins da Silva - Portugal
Douglas Cato - Australia	Francisco Montero - Spain
Hou Chaohuan - China	Antonio Moreno - Spain
Lawrence A. Crum - U.S.A.	Philip A. Nelson - U.K.
Gilles Daigle - Canada	Massimo Pappalardo - Italy
Françesc Daumal - Spain	Jaime Pfretzschner - Spain
Nikolai A. Dubrovsky - Russia	Roberto Pompoli - Italy
Stephen J. Elliot - U.K.	Manuel Recuero - Spain
Hugo Fastl - Germany	Joachim Scheuren - Germany
Mathias Fink - France	Charles E. Schmid - U.S.A.
Luis Gaete - Chile	Brigitte Schulte-Fortkamp - Germany
Amando García - Spain	Juan Jose Sendra - Spain
Guillermo Gaunaurd - U.S.A.	Antoni Sliwinski - Poland
Samir N.Y. Gerges - Brasil	Hideki Tachibana - Japan
Colin H. Hansen - Australia	Machael Vorländer - Germany
Finn Jensen - Denmark	Suk Wang Yoon - Korea

#### **1.3. Organizing Committee**

Honorary President: Andrés Lara  
President: Juan A. Gallego-Juárez  
Vice-Presidents:  
Antonio Pérez-López  
Carlos Ranz-Guerra  
J. Salvador Santiago  
General Secretary and Manager: Antonio Calvo-Manzano  
Members:

Harald Aagesen	Tomás Gómez Álvarez-Arenas
Miguel Arana	Itziar González Gómez
Higini Arau	Julio González Suárez
José Luis Bento Coelho	Isabel López Barrio
Luis Bragança	Juan José Martínez Requena
Cleofé Campos	Emilio Mateos
Joan Casamajó	Jorge Patricio
Francisco José Chinchurreta	Placido Perera
Carlos de la Colina	Antonio Ramos
Azucena Cortés	Enrique Riera
María Cuesta	José María Ruiz
Ana Delgado	José Luis San Emeterio
Cesar Díaz	Pedro Tomás Sanz Sánchez

#### 1.4. Organizing Institutions: Profiles, Boards and Members

The 19th International Congress on Acoustics is organized by the Spanish Acoustical Society, SEA and the Institute of Acoustics, -IA- CSIC, under the auspices of the International Commission for Acoustics, ICA, and the collaboration of the Municipality of Madrid.

##### International Commission for Acoustics -ICA-

###### Profile

The International Commission for Acoustics (ICA) was instituted in 1951 as a subcommittee of the International Union of Pure and Applied Physics (IUPAP). New Statutes were adopted by the International Commission for Acoustics in Antwerp 1996 March 31 and were approved by the IUPAP General Assembly in Uppsala Sweden 1996 September 20. An information letter explaining the proposed changes to the status of the commission was circulated to acoustical societies 1996 May 10. The new ICA held its first General Assembly 1998 June 25 during the 16th Congress in Seattle where the By-laws of the new organization were adopted by the Member Societies. The ICA also applied to become an Affiliated Commission of the International Union of Applied and Theoretical Mechanics (IUTAM). A motion in favour of Affiliation was carried unanimously at the IUTAM General Assembly Meeting held at the University of Stuttgart 1998 August 28-30. The Commission remains affiliated to the International Union for Pure and Applied Physics (IUPAP). The ICA became a Scientific Associate of the International Council for Science ICSU in its own right in 2006

The purpose of the International Commission on Acoustics (ICA) is to promote international development and collaboration in all fields of acoustics including research, development, education, and standardisation.

Means for the Commission to fulfil its mission are:

- a) i) to maintain close contacts with national and regional acoustical societies and associations as well as other relevant professional organisations and seek consensus in matters of mutual interest; ii) to provide an information service on societies, congresses, symposia, etc., research and education organisations in the field of acoustics; iii) to take a proactive role in co-ordinating the main international meetings within acoustics.
- b) to convene the International Congresses on Acoustics in accordance with the Commission's guidelines and to act as the International Advisory Committee for these congresses.
- c) to sponsor or co-sponsor other topical and special international conferences normally in close cooperation with national and/or regional organisations and to give financial support (grants or guarantees), as a grant to organising committees for such meetings or as a travel grant to participants.

##### Previous International Congresses on Acoustics

Dates and locations of past congresses of the International Commission for Acoustics:

01 ICA 1953 Delft, Netherlands	10 ICA 1980 Sydney, Australia
02 ICA 1956 Cambridge, USA	11 ICA 1983 Paris, France
03 ICA 1959 Stuttgart, Germany	12 ICA 1986 Toronto, Canada
04 ICA 1962 Copenhagen, Denmark	13 ICA 1989 Belgrade, Yugoslavia
05 ICA 1965 Liege, Belgium	14 ICA 1992 Beijing, China
06 ICA 1968 Tokyo, Japan	15 ICA 1995 Trondheim, Norway
07 ICA 1971 Budapest, Hungary	16 ICA 1998 Seattle, USA
08 ICA 1974 London, England	17 ICA 2001 Rome, Italy
09 ICA 1977 Madrid, Spain	18 ICA 2004 Kyoto, Japan

##### ICA Board

**President:** Philip A. Nelson

**Vice-President:** Suk Wang Yoon

**Secretary-General:** Sonoko Kuwano

**Treasurer:** Hugo Fastl

**Past-President:** Gilles Daigle

##### Members:

Ewald Benes

Phillipe Blanc-Benon

Douglas Cato

Samir N.Y. Gerges

Chaohuan Hou

Roberto Pompoli



Nikolai A. Dubrovsky  
Juan A. Gallego-Juarez

**Member Societies:**

Argentina: Asociacion de los Acústicos Argentinos  
Australia: Australian Acoustical Society  
Austria: Österreichische Gesellschaft für Akustik  
Belarus: Belarusian Acoustical Society  
Belgium: Association Belge des Acousticiens/  
Belgische Akoestische Vereniging  
Brazil: Sociedade Brasileira de Acustica  
Canada: Canadian Acoustical Association  
Chile: Sociedad Chilena de Acústica  
China: Acoustical Society of China  
Croatia: Acoustical Society of Croatia  
Czech Republic: Czech Acoustical Society  
Denmark: Danske Akustiske Sällskapet  
Egypt: Acoustical Society of Egypt  
Finland: Acoustical Society of Finland  
France: French Acoustical Society  
Germany: Deutsche Gesellschaft für Akustik  
Hong Kong: Hong Kong Institute of Acoustics  
Hungary: OPAKFI  
India: Acoustical Society of India  
Italy: Associazione Italiana di Acustica  
Japan: Acoustical Society of Japan  
Korea: Acoustical Society of Korea  
Spanish Acoustical Society -SEA-

Charles E. Schmid  
Antoni Sliwinski

Latvia: Latvian Acoustical Society  
Lithuania: Lithuanian Acoustical Society  
Mexico: Mexican Institute of Acoustics  
Netherlands: Nederland Akoestisch Genootschap  
New Zealand: New Zealand Acoustical Society  
Norway: Norwegian Acoustical Society  
Peru: Sociedad Peruana de Acústica  
Poland: Polish Academy of Sciences Committee of Acoustics  
Poland: Polish Acoustical Society  
Portugal: Sociedade Portuguesa de Acústica  
Russia: East-European Acoustical Association  
Russia: Russian Acoustical Society  
Slovakia: Slovak Acoustical Society  
Slovenia: Slovenian Acoustical Society  
South Africa: Southern African Acoustics Institute  
Spain: Sociedad Española de Acústica  
Sweden: Svenska Akustiska Sällskapet  
Switzerland: Swiss Acoustical Society  
Turkey: Turkish Acoustical Society  
United Kingdom: Institute of Acoustics  
U.S.A.: Acoustical Society of America  
U.S.A.: Institute of Noise Control Engineering of the U.S.A.  
Yugoslavia: Acoustical Society of Yugoslavia

**Profile**

The Spanish Acoustical Society (Sociedad Española de Acústica, SEA) was founded in 1969 as a non-for-profit scientific and technical association. Its primary goal is to enhance the development of Acoustics in Spain.

The specific objectives of SEA are:

- to promote continuous progress in all fields of Acoustics,
- to foster Research and Development in Science and Technology of Acoustics, and its applications,
- to support and contribute with technical advice to Administration, Companies and Associations activities seeking the improvement on acoustic environment, its control, and its influence on populations welfare
- to host and organize national and international meetings and conferences as forum for discussion and exchanges of knowledge and experiences among specialists,
- to publish regularly the technical journal, Revista de Acústica

Spanish Acoustical Society (SEA) links with other Acoustics bodies at national and international level are a fundamental component of its character:

- Since its origin, SEA is in close relationship with Acoustics Institute of the Spanish Scientific Research Council.
- Since the beginning, SEA has cooperated with the acoustical societies of other countries, particularly those in Europe and Iberoamerica.
- SEA is a founding member of the European Acoustics Association –EAA, International Commission for Acoustics-ICA, and Iberian Federation of Acoustics– FIA.
- SEA is also member of the Spanish Committee of Audiophonology- CEAf, Bureau International d´Audiophonologie– BIAP, International Institute of Noise Control Engineering – I-INCE, and International Institute of Sound and Vibration– IISV.

Every year, SEA celebrates a national congress, TECNIACÚSTICA, in different cities of Spain to promote the development of Acoustics in academia and private sector, providing a common space for exchange and reporting about latest research developments and technical advances. In parallel to the annual congress, a technical exhibition of products and services is organized- EXPOACÚSTICA.

We would like to highlight other significant meetings organized by SEA:

- 9th International Congress on Acoustics, Madrid, 1977, with satellite symposia in Barcelona and Sevilla. This congress met together 1,500 participants from all over the world, and near 1,000 papers were presented. We are fortunate enough to celebrate again, 30 years later, the 19th edition of this ICA congress in Madrid in 2007.
- 8th FASE Symposium on Environmental Acoustics, Zaragoza, 1989;

- 11th FASE Symposium on Acoustical Materials and Ultrasonic Transducers, Valencia 1984;
- Conference on “Environmental Noise in Urban Areas”, Barcelona, 1990;
- International conference on “Noise in Urban Areas”, Madrid, 1991;
- International Conference on the “Acoustic Quality of Concert Halls” in Madrid in 1994, on the occasion of SEA's 25th anniversary;
- 2nd Iberian Congress on Acoustics and an EAA Symposium on Architectural Acoustics, Madrid, 2000.
- FORUM ACUSTICUM, Sevilla 2002

#### SEA BOARD

**Honorary President:** Andrés Lara Sáenz

**President:** Antonio Pérez-López

**Vice-Presidents:**

J. Salvador Santiago Páez

Amando García Rodríguez

**General Secretary:** Antonio Calvo-Manzano

**Treasurer:** Julio González Suárez

**Members:**

Harald Aagesen

Miguel Arana Burgui

Higini Arau Puchades

Joan Casamajó Monclus

Azucena Cortes Liendo

Francesc Daumal Doménech

Ana Delgado Portela

César Díaz Sanchidrian

Ana Espinel Valdivieso

Juan Antonio Gallego Juárez

Juan José Martínez Requena

Antonio Moreno Arranz

Plácido Perera Melero

Carlos Ranz Guerra

José María Ruiz Pérez

Javier Serra María-Tomé

Teofilo Zamarreño García

#### Institute of Acoustics -IA- CSIC

##### Profile

The Instituto de Acústica-CSIC main activity is to deepen in the knowledge of the generation, propagation, attenuation and detection of waves and sonic and ultrasonic perturbations, as well as to develop related technologies. This activity has an important incidence on the society by improving the sound environment through the noise control and the increment of the industrial production quality and so reaching new techniques and new and more efficient processes with care of the ambient. The Instituto de Acústica-CSIC is, by now, the national reference centre in those disciplines that are the subject of its work.

The Instituto de Acústica was created in 1976 from the Acoustics Department of the former CIF “Leonardo Torres Quevedo”. This first nucleus dealt with Electroacoustics and Ultrasound.

At the beginning of the sixties lines like Noise and Underwater Acoustics, were introduced. In 1978, the Institute was structured in three units: Environmental Acoustics, Radiation and Propagation and Ultrasound, altogether with two Service Units: Information and Documentation and Technical Assistance and Metrology.

The Instituto is now formed by two Departments Environmental Acoustics and Ultrasonic Signals, Systems and Technologies and two Service Units: Administration and Technical Assistance.

The Instituto de Acústica is located on the Serrano Campus of the CSIC at Serrano, 144. The Instituto de Acústica together with the Instituto de Física Aplicada (Institute of Applied Physics) and the Instituto de Automática Industrial (Institute for Industrial Automation) form the Centro de Tecnologías Físicas (Physics Technologies Centre), “Leonardo Torres Quevedo”.

The Instituto de Acústica and the Instituto de Física Aplicada, together with some other small units, share common services that will be enumerated later.

The Instituto de Acústica was the first research centre devoted to Acoustics that was created in our country. Although, in posterior years there have appeared some other centres that have acoustics as one of their main concerns, mainly at Universities, there is no other centre in Spain with a field coverage as extensive as our Institute and it does exist no other centre with an experimental infrastructure as important as the one owned by the Instituto de Acústica. This primacy together with the relationship that the Instituto de Acústica maintains with centres, from Europe and USA, place the Instituto de Acústica as a reference in Spain.

The reference position is seen activated by the formative tasks created in other centres from people who temporarily belonged to the Institute. The centre imparts numerous postgraduate, pre and post doctoral courses in cooperation with or atten-

ding the demands of Spanish Universities, Professional Colleges, Enterprise Associations and the local Autonomous and State Administrations. When no Courses are involved, this collaboration shows up in Conferences, consultancies and assessment and expert appraisals. The Instituto de Acústica co-organizes, every year, with the Acoustical Society of Spain, SEA, and the Acoustical Society of Portugal, SPA, and the punctual collaboration of specific University Centres, the Acoustics Conferences, Tecniacustica. In these Conferences, the past year scientific and technical acoustical activity, is presented.

Since 1996, when the Acoustical Society of Portugal joined in, these Conferences have become international events. After the 2004 Conference held in Guimaraes (Portugal) laboratories and centres from Germany, Italy and France have adhered to this initiative.

Thanks to the Institute involvement in the management of Acoustical Conferences, the International Commission on Acoustics has appointed our Institute, together with the Acoustical Society of Spain, to organise the XIX International Congress on Acoustics that will be held in Madrid in September 2007. Professor Andres Lara, who was the first director of the Instituto de Acústica, will be the President of Honour while our Research Professor Juan Antonio Gallego Juárez will be the executive President.

The Institute activities place it inside the Applied Research field. Its activities are grouped within thematic lines framed in the multidisciplinary character of Acoustics. Let us just mention that these activities go from Medical Sciences, to Oceanographic, through the Environment, Material Engineering, Architecture, Music, Comfort, Nourishment, and Health.

#### IA BOARD

**Director:** Carlos Ranz Guerra

**Vice-director:** Francisco Montero de Espinosa

**Heads of Department:** José Salvador Santiago Páez; Tomás Gómez Alvarez Arenas

**Manager:** Emilio Mateos Jiménez

## 2. Sponsors

Ministerio de Educación y Ciencia  
Ministerio de Medio Ambiente  
Ministerio de Vivienda  
Comunidad de Madrid  
Ayuntamiento de Madrid  
Consejo Superior de Investigaciones Científicas  
Colegio Oficial de Ingenieros Tecnicos de Telecomunicacion  
Fundación Ramón Areces  
International Society of Electrochemistry  
Rockwool

## 3. Congress Venue

Palacio Municipal de Congresos -Campo de las Naciones- Municipal Conference Centre

Avda. de la Capital de España Madrid, s/n.

E-28042 Madrid, Spain.

Phone: 0034 917 220 400

Fax: 0034 917 210 607

Web: [http://www.madridespaciosycongresos.com/palacio/index\\_i.cfm](http://www.madridespaciosycongresos.com/palacio/index_i.cfm)

The Municipal Conference Centre -PMC- is an iconic building, located at the "Campo de las Naciones", a new exhibition and financial area in the city of Madrid. It is very easily accessed both from the city centre and the Barajas International Airport Madrid-Barajas.

Parking facilities: 503 spaces.

## 4. Structure of the Congress Building (PMC), Conference Rooms and other services

The PMC consists in three main blocks:

The Ground Floor central area: Auditorium A, Registration Desks and main lobby.

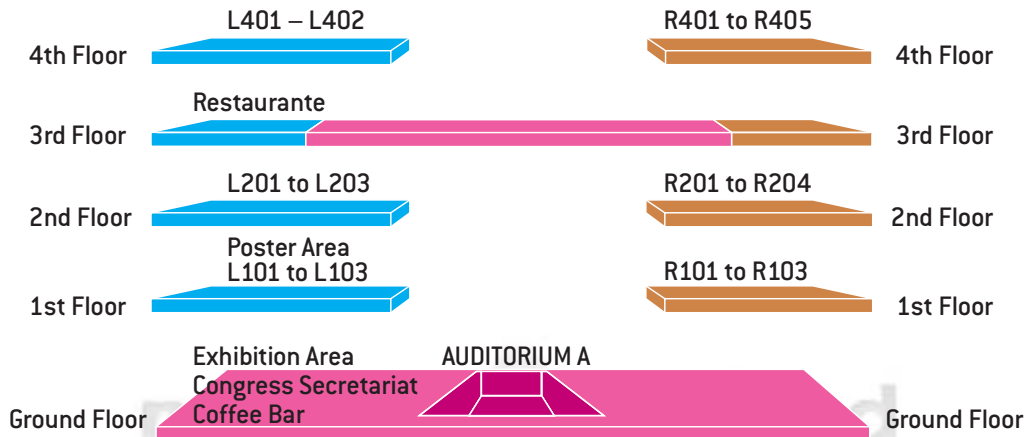
Ground Floor: Congress Secretariat, Exhibition Area, Posters Area, Cafeteria.

The left wing: Conference rooms and other services in four levels

1st level - Conference Rooms L-101, L-102, L-103

- Poster Area

- 2nd level - Conference Rooms L-201, L-202, L-203
- 3rd level - Restaurant
- 4th level - Conference Rooms L-401, L-402
- The right wing: Conference rooms and other services in three levels
- 1st level - Conference Rooms R-101, R-102, R-103
- 2nd level - Conference Rooms R-201, R-202, R-203, R-204
- 4th level - Conference Room R-401
  - Reception of the individual presentations: R-402
  - Internet Rooms: R-403, R-404, R-405



## 5. General Programme

### ICA2007MADRID - GENERAL PROGRAMME

Sept.	Sunday-2nd	Monday-3rd	Tuesday-4th	Wednesday-5th	Thursday-6th	Friday-7th	
Hours							
09:00	Registration	Registration	Sessions S.02	Sessions S.04	Sessions S.06	Sessions S.08	
10:30		Opening Ceremony	Plenary Lecture PL-002	Plenary Lecture PL-003	Plenary Lecture PL-004	Plenary Lecture PL-005	
12:00		Opening Lecture PL-001	Plenary Lecture PL-002	Plenary Lecture PL-003	Plenary Lecture PL-004	Plenary Lecture PL-005	
13:00		Welcome Cocktail & Tapas	Lunch break	Lunch break	Lunch break	Closing Act Farewell Cocktail & Tapas	
15:00		Sessions S.01	Sessions S.03	Sessions S.05	Sessions S.07		
18:00				Technical demonstrations	Technical demonstrations	Technical demonstrations	
19:00				Musical Performance	Musical Performance		
19:30						Congress Dinner	
WORKSHOP							
		Tuesday, 4th	9 h to 12 h - 15 h to 18 h, Room L-202 - Workshop on "Education in Noise Control Engineering"				

## 6. EXPOACUSTICA 2007

EXPOACUSTICA® 2007 MADRID, an international technical exhibition of products and services in Acoustics and Vibrations, will be held jointly with the ICA2007MADRID.

EXPOACUSTICA® 2007 MADRID will present the most recent novelties in products, equipments, materials and services related with the different fields of acoustics, thus offering an excellent opportunity for the companies of the sector to show their performances in:

- Acoustic engineering
- Acoustic materials
- Acoustic screens
- Acoustical treatments
- Anti-vibration systems
- Computer applications
- Equipment and instruments for measurement and analysis
- Noise Mapping & Noise Prediction

The Exhibition will be located at Ground Floor in the Congress venue.

Booth No.	Exhibitors	Booth No.	Exhibitors
1	Alava Ingenieros - 01dB	13	MSC Software Simulating Reality S.A.
2	Brüel & Kjær	14	Saint-Gobain-Isover
3	Alava Ingenieros - Head Acoustic	15	Acoustics Engineering
4	Brüel & Kjær	16	AECOR
5	Alava Ingenieros - LMS - Spectronics-Oros	17	Chova
6	Acusttel	18	EAA-Acoustics'08 París
7	Alava Ingenieros - Svantek	19	Complaistec. AIE
8	Rockwool	20	ICA-2010 Sydney
9	Cesva Instruments	22	I2A2
10	G.R.A.S. Sound & Vibration A/S	24	ESI Group
11	Aries / Norsonic	26	Sonogamma
12	AAC Centro de Acústica Aplicada. Sound Plan		

### Technical Demonstrations

- TD-001 Tuesday 4th 18:00 hours, Room L-201 by Brüel & Kjær  
TD-002 Wednesday 5th 18:00 hours Room L-201 by Alava Ingenieros  
TD-003 Thursday 6th 18:00 hours, Room L-201 by Cesva Instruments

## 7. Social activities

The ICA2007MADRID Organization has foreseen the development of a social programme of activities for both registered congress members and accompanying persons.

- Monday, 3rd: Opening Ceremony, Musical Performance and Welcome Cocktail&Tapas
- Tuesday, 4th: Musical Performance
- Wednesday, 5th: Musical Performance
- Thursday, 6th: Dinner congress (Optional)
- Friday, 7th: Closing Act and Farewell Cocktail&Tapas

All these activities, cocktail&tapas and musical performances, except the Congress Dinner, are included in the Participants and Accompanying Persons Registration Fee.

## 8. Programme for Accompanying Persons

To make the stay in Madrid pleasant for the accompanying persons, the following guided tours (included in the registration fee of the accompanying persons) will be organized:

T1- Tuesday 4th - Morning- Madrid sightseeing tour and visit to the Royal Palace

T2- Wednesday, 5th - Full day, including lunch- El Escorial Monastery

T3- Thursday, 6th - Morning - Prado Museum and Reina Sofia Museum

Important note.- The accompanying persons must be pre-registered for the guided tours.

Departure of the buses: Congress venue at the 09:30 hours.

### 9. Souvenir of the Congress – “Puerta de Alcalá” (Alcala Gate) Symbol of Madrid

The Puerta de Alcalá is one of the most significant monuments of Madrid, together with the nearby Cibeles Fountain. It was a design of the architect Francesco Sabatini and built by order of King Carlos III, the so called “Best Mayor of Madrid”. It is located at the Plaza de la Independencia, at the crossing of Alcalá, Alfonso XII, Serrano and Salustiano Olózaga and near the Puerta de España of the Retiro Gardens. The name of the gate derives from the fact that it is on the road from Madrid to Alcalá de Henares.



m a d r i d

## 10. CONGRESS PROGRAMME

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## 10. Congress Programme

### 10.1. Plenary Lectures

Monday, 3rd – 11:30 h. Auditorium A

PL-001. “Acoustics for the 21st Century” (Opening Lecture)

*Juan A. Gallego-Juárez - Spain*

*Research Professor, Ultrasonics*

*Higher Council for Scientific Research -CSIC-*

*Instituto de Acústica, Madrid*

Session chair person: Andrés Lara, President of Honour of the Spanish Acoustical Society

Tuesday, 4th – 12:00 h. Auditorium A

PL-002. “Psychological evaluation of sound environment along temporal stream”

*Sonoko Kuwano - Japan*

*Professor of the Laboratory of Environmental Psychology*

*Graduate School of Human Sciences, Osaka University*

*Professor of the Department of Environmental Engineering, Graduate*

*School of Engineering, Osaka University*

Session chair person: Ichiro Yamada, Head of Aviation Environment Research Center, AEIF

Wednesday, 5th – 12:00 h. Auditorium A

PL-003. “Cavitation and Cetacean: Bubble Acoustics by whales and dolphins”

*Timothy G. Leighton - U.K.,*

*Professor of Ultrasonics and Underwater Acoustics, Centre for Ultrasonics and Underwater Acoustics*

*Director of Postgraduate Research, Institute of Sound and Vibration Research*

*University of Southampton, U.K.*

Session chair person: Philip A. Nelson, President of the International Commission for Acoustics

Thursday, 6th – 12:00 h. Auditorium A

PL-004. “Numerical Methods in Acoustics: Facts, Fears, Future”

*Otto von Estorff – Germany*

*Director Institut für Modellierung und Berechnung*

*Technische Universität Hamburg*

Session chair person: Michael Vorländer, President of the European Acoustics Association

Friday, 7th – 12:00 h. Auditorium A

PL-005. “From Speech Privacy to Speech Security”

*John S. Bradley - Canada*

*Principal Research Officer*

*Institute for Research in Construction*

*National Research Council, Ottawa*

Session chair person: Gilles Daigle, President-elect of the Acoustical Society of America

### 10.2. Technical Sessions

#### 10.2.1. Subject Classification Criteria

The Invited Papers -IP- and Contributed Papers are distributed in 14 Thematic Fields; each Field comprises several Structured Sessions -SS- on specific topics; within each SS are included Invited Papers and Contributed Papers.

The Contributed Papers not classified in the specific topics of the SS have been included in each Field in the Session “General”.

#### 10.2.2. Identification paper codes

– Thematic Fields, three capital letters with the initials of the title of the field.

– Structured Sessions -SS-, with the three letter code of the Field in which they are included, followed by the two digits that indicate the order in the SS.

– Papers. The reference of each paper is composed by the code (three letters and two numbers) of the Field and Structured Session, followed by the three digits that normally indicate the order of the presentation of the papers in the SS.

– Invited Papers -IP-. The invited papers included in the different structured session, have the initial IP after the paper code.



Example: RBA-01-005-IP.

- RBA: This paper is included: in the SS- RBA- Room and Building Acoustics
- 01: First Session in this Field: 01- Acoustics and sustainable building
- 005: Paper that will be in the 5th place in the session SS-RBA-01
- IP: Invited Paper

#### 10.2.3. Development of the oral sessions

The Technical Sessions will be held in parallel, from Monday 3th September (afternoon) until Friday 7th September (noon). Morning sessions from 9.00 until 12:00 h; afternoon sessions from 15:00 until 18.00 h.

Session Chairs are kindly requested to follow in a strict way the time sequence indicated by the acoustic signals, to permit all participants to attend a paper that could be presented in another room. If an author is not in the room to present the paper, the Session Chair is asked either to allow additional discussion of papers already presented, or to declare a recess until the next presentation, so that subsequent papers are not presented ahead of the scheduled times.

#### 10.2.4. Poster sessions

Morning sessions: 10.00 h – 13.45 h, Tuesday to Thursday

Afternoon sessions: 14.15 h – 18:00 h, Tuesday to Thursday

The authors of the posters are requested to install them in the assigned board (1.80 m height x 0.80 m wide) between 9.30 h and 10 h for the morning sessions, and between 13.45 h and 14.15 h for the afternoon sessions. The organizers will provide the fastening material. The format of the poster presentation is free. The author is kindly asked to dismantle the poster at the end of the session.

Recommended presence of the author(s) of the poster:

- Morning session from 13:00 h to 13:45 h.
- Afternoon sessions from 14:15 h to 15:00 h.

#### 10.2.5. Structured Sessions

##### BIO – Bioacoustics

BIO-01 Animal acoustics

BIO-02 Auditory neuroscience and bioacoustics

BIO-03 Marine bioacoustics

##### CAS- Communication Acoustics, including Speech

CAS-01 Communication Acoustics

CAS-02 Oto-acoustic emissions

CAS-03 Speech acoustics

CAS-04 CAS-General

##### COM- Computational Acoustics

COM-01 Advances and applications of computational methods for sound radiation and scattering

COM-02 Boundary element methods in acoustics

COM-03 Computational methods in combustion noise

COM-04 Computational methods in fluid-structure interaction

COM-05 Numerical simulation of cavities and indoor spaces

COM-06 COM-General

##### ELE-Electro-acoustics and Audio Engineering

ELE-01 Loudspeakers and sound reinforcement

ELE-02 Microphones

ELE-03 Sensor array systems

ELE-04 ELE-General

##### ENV- Environmental Acoustics

ENV-01 Alternative mapping of the urban sound environment

ENV-02 Community response to noise

ENV-03 Environmental noise policy

ENV-04 Long-term evaluation of the impact of environmental noise

ENV-05 Low frequency noise

ENV-06 Noise barriers

ENV-07 Noise mapping and action planning  
ENV-08 Prediction of sound propagation in urban environment  
ENV-09 Sound quality outdoors  
ENV-10 Soundscape and cultural perception  
ENV-11 Transportation noise

#### **MUS-Musical Acoustics**

MUS-01 Acoustics of stringed instruments  
MUS-02 Ancient instruments and traditional musical instruments  
MUS-03 Choir acoustics  
MUS-04 Linear and nonlinear modes in musical acoustics  
MUS-05 Physical models and virtual musical instruments  
MUS-06 Production and perception of singing voices  
MUS-07 MUS-General

#### **NLA-Non-linear Acoustics**

NLA-01 Cavitation and bubbly media  
NLA-02 Generation, measurement and modelling of high power sound waves in liquid or air  
NLA-03 Nonlinear acoustics in medical ultrasound  
NLA-04 Nonlinear dynamic and chaos  
NLA-05 Nonlinear interactions of vibration modes in solid structures  
NLA-06 Nonlinear methods in the evaluation of material microdamage  
NLA-07 Numerical methods in non-linear acoustics  
NLA-08 Sonic boom  
NLA-09 Subharmonic generation in acoustic resonators  
NLA-10 NLA-General

#### **NOI- Noise: sources and control**

NOI-01 Aircraft noise  
NOI-02 Automotive acoustics  
NOI-03 Industrial noise  
NOI-04 Noise measurements  
NOI-05 Outdoor sound propagation  
NOI-06 Railway Noise  
NOI-07 NOI-General

#### **PHY-Physical Acoustics**

PHY-02 Acoustics of porous media  
PHY-03 Acoustics of unconsolidated granular media  
PHY-04 Adaptive and active materials  
PHY-05 Aeroacoustic sensing for urban warfare applications  
PHY-06 Dispersion and attenuation of sound in various materials  
PHY-07 Standing waves  
PHY-08 PHY-General

#### **PPA-Physiological and Psychological Acoustics**

PPA-01 Algorithmic music analysis and processing  
PPA-02 Applications of psychoacoustics  
PPA-03 Audio-visual interaction  
PPA-04 Audition of the sound source and its properties  
PPA-05 Binaural hearing and spatial perception  
PPA-06 Binaural technology  
PPA-07 Computational models of the auditory system  
PPA-08 Virtual and real auditory environments-auditory display  
PPA-09 PPA-General

#### **RBA- Room and Building Acoustics**

RBA-01 Acoustics and sustainable building  
RBA-02 Acoustics of ancient theatres: their use for acoustical performances  
RBA-03 Airborne sound insulation  
RBA-04 Class room acoustics

RBA-05 Computational methods for room acoustics  
RBA-06 Concert hall acoustics  
RBA-07 Measuring methods and standards in room and building acoustics  
RBA-08 Microperforated materials  
RBA-09 New materials and systems in building acoustics  
RBA-10 Open-plan office acoustics  
RBA-11 Reflections, scattering and diffraction in room acoustics  
RBA-12 Sound insulation between dwellings  
RBA-13 Spatial hearing in concert auditoria  
RBA-14 Structure borne sound sources (Impact noise and equipment noise)  
RBA-15 Virtual acoustics and auralisation methods  
RBA-16 RBA-General

**SAV- Structural Acoustics and Vibration**

SAV-01 Applications of analytical techniques in general  
SAV-02 Simulation and environmental factors  
SAV-03 SAV-General

**ULT- Ultrasonics**

ULT-01 Acoustic radiation force and biomedical applications  
ULT-02 Air-borne transducers for ultrasonic detection  
ULT-03 Analytical and numerical (FEM) transducer modelling  
ULT-04 Capacitive ultrasonic transducers: Modelling and technology  
ULT-05 HIFU in medical therapy  
ULT-06 High intensity acoustics near surfaces and interfaces  
ULT-07 High-power ultrasonic transducers  
ULT-08 High-power ultrasound in large-scale sonochemical reactors  
ULT-09 New power ultrasonic processes and systems  
ULT-10 Signal processing for ultrasonic imaging & detection  
ULT-11 Sonochemical water treatment  
ULT-12 Sonoelectrochemical processes  
ULT-13 Tissue characterization by ultrasound  
ULT-14 Ultrasonic manipulation of micron-sized particles and cells  
ULT-15 Ultrasonic transducer systems for imaging & detection  
ULT-16 Ultrasound contrast agents  
ULT-17 ULT-General

**UNW- Underwater Acoustics**

UNW-01 Inversion methods in underwater acoustics  
UNW-02 Scattering  
UNW-03 Seafloor characterization, imaging and GIS  
UNW-04 UNW-General

## 10.2.6. Daily Timetable

### 10.2.6.1 Oral Session

#### Session S.01 - Monday 3rd - Afternoon

Hours	Rooms							
	L - 101	L - 102	L - 103	L - 201	L - 202	L - 203	L - 401	L - 402
15:00	RBA-02-001	RBA-13-001	RBA-10-001	ENV-10-001	ENV-03-001	NOI-06-001	PPA-07-001	PPA-04-001
15:20	RBA-02-002	RBA-13-002	RBA-10-002	ENV-10-002	ENV-03-002	NOI-06-002	PPA-07-002	PPA-04-002
15:40	RBA-02-003	RBA-13-003	RBA-10-003	ENV-10-003	ENV-03-003	NOI-06-003	PPA-07-003	PPA-04-003
16:00	RBA-02-004	RBA-13-004	RBA-10-004	ENV-10-004	ENV-03-004	NOI-06-004	PPA-07-004	PPA-04-004
16:20	RBA-02-005	RBA-13-005	RBA-10-005	ENV-10-005	ENV-03-005	NOI-06-005	PPA-07-005	PPA-04-005
16:40	RBA-02-006	RBA-13-006	RBA-10-006	ENV-10-006	RBA-05-019	NOI-06-006	PPA-07-006	PPA-01-001
17:00	RBA-02-007	RBA-03-005	RBA-10-007	ENV-10-007	RBA-05-020	NOI-06-007	PPA-07-007	PPA-01-002
17:20	RBA-02-008	RBA-14-014	RBA-10-008	ENV-10-008	RBA-05-021	NOI-06-008	PPA-07-008	PPA-01-003
17:40	RBA-02-009	RBA-14-015	RBA-10-009			NOI-06-009	PPA-07-009	PPA-01-004

#### Session S.01 - Monday 3rd - Afternoon

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
15:00	BIO-01-001	COM-05-001	UNW-01-001	NLA-09-001		ULT-14-001	ULT-06-001	MUS-02-001
15:20	BIO-01-002	COM-05-002	UNW-01-002	NLA-09-002		ULT-14-002	ULT-06-002	MUS-02-002
15:40	BIO-01-003	COM-05-003	UNW-01-003	NLA-09-003		ULT-14-003	ULT-06-003	MUS-02-003
16:00	BIO-02-001	COM-05-004	UNW-01-004	NLA-09-004	PHY-02-001	ULT-14-004	ULT-06-004	MUS-02-004
16:20	BIO-02-002	COM-05-005	UNW-01-005	NLA-03-001	PHY-02-002	ULT-14-005	ULT-07-001	MUS-02-005
16:40	BIO-02-003	COM-05-006	UNW-02-001	NLA-03-002	PHY-02-003	ULT-14-006	ULT-07-002	MUS-02-006
17:00	BIO-03-001	COM-05-007	UNW-02-002	NLA-03-003	PHY-03-001	ULT-14-007	ULT-07-003	MUS-02-007
17:20	BIO-03-002	COM-05-008	UNW-02-003	NLA-03-004	PHY-03-002	ULT-14-008	ULT-07-004	MUS-02-008
17:40	BIO-03-003	COM-05-009	UNW-02-004		PHY-03-003	ULT-14-009	ULT-07-005	MUS-02-009
18:00						ULT-14-010		
18:20						ULT-14-011		

#### Session S.02 - Tuesday 4th - Morning

Hours	Rooms							
	L - 101	L - 102	L - 103	L - 201	L - 202	L - 203	L - 401	L - 402
09:00	RBA-06-001	RBA-15-001	RBA-10-010	ENV-02-001	Workshop	NOI-04-001	PPA-07-010	PPA-03-001
09:20	RBA-06-002	RBA-15-002	RBA-10-011	ENV-02-002	Workshop	NOI-04-002	PPA-07-011	PPA-03-002
09:40	RBA-06-003	RBA-15-003	RBA-10-012	ENV-02-003	Workshop	NOI-04-003	PPA-07-012	PPA-03-003
10:00	RBA-06-004	RBA-15-004	RBA-10-013	ENV-02-004	Workshop	NOI-04-004	PPA-07-013	PPA-03-004
10:20	RBA-06-005	RBA-15-005	RBA-07-001	ENV-02-005	Workshop	NOI-04-005	PPA-07-014	PPA-03-005
10:40	RBA-06-006	RBA-15-006	RBA-07-002	ENV-02-006	Workshop	NOI-04-006	PPA-07-015	PPA-03-006
11:00	RBA-06-007	RBA-15-007	RBA-07-003	ENV-02-007	Workshop	NOI-04-007	PPA-07-016	PPA-03-007
11:20	RBA-06-008	RBA-15-008	RBA-07-004	ENV-02-008	Workshop	NOI-04-008	PPA-07-017	PPA-03-008
11:40	RBA-06-009	RBA-15-009	RBA-07-005	ENV-02-009	Workshop	NOI-04-009		PPA-03-009
12:00	PLENARY LECTURE PL-002 - AUDITORIUM A							
13:00	LUNCH BREAK							

#### Session S.02 - Tuesday 4th - Morning

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
09:00	ELE-01-001	COM-01-001	UNW-02-005	NLA-01-001	PHY-03-004	ULT-01-001	ULT-07-006	MUS-03-001
09:20	ELE-01-002	COM-01-002	UNW-03-001	NLA-01-002	PHY-03-005	ULT-01-002	ULT-07-007	MUS-03-002
09:40	ELE-01-003	COM-01-003	UNW-03-002	NLA-01-003	PHY-03-006	ULT-01-003	ULT-09-001	MUS-03-003
10:00	ELE-01-004	COM-01-004	UNW-03-003	NLA-01-004	PHY-03-007	ULT-01-004	ULT-09-002	MUS-03-004
10:20	ELE-01-005	COM-01-005	UNW-03-004	NLA-01-005	PHY-03-008	ULT-01-005	ULT-09-003	MUS-03-005
10:40	ELE-01-006	COM-01-006	UNW-04-001	NLA-01-006	PHY-03-009	ULT-01-006	ULT-09-004	MUS-03-006
11:00	ELE-01-007	COM-01-007	UNW-04-002	NLA-01-007	PHY-03-010	ULT-01-007	ULT-09-005	MUS-06-001
11:20	ELE-01-008	COM-01-008	UNW-04-003	NLA-01-008	PHY-03-011	ULT-01-008	ULT-09-006	MUS-06-002
11:40	ELE-01-009	COM-01-009	UNW-04-004	NLA-01-009	PHY-03-012	ULT-01-009	ULT-09-007	MUS-06-003
12:00	PLENARY LECTURE PL - 002 - AUDITORIUM A							
13:00	LUNCH BREAK							

### Session S.03 - Tuesday 4th - Afternoon

Hours	Rooms							
	L - 101	L - 102	L - 103	L - 201	L - 202	L - 203	L - 401	L - 402
15:00	RBA-06-010	RBA-01-001	RBA-07-006	ENV-05-001	Workshop	NOI-04-010	PPA-02-001	PPA-03-010
15:20	RBA-06-011	RBA-01-002	RBA-07-007	ENV-05-002	Workshop	NOI-04-011	PPA-02-002	PPA-03-011
15:40	RBA-06-012	RBA-01-003	RBA-07-008	ENV-05-003	Workshop	NOI-04-012	PPA-02-003	PPA-03-012
16:00	RBA-06-013	RBA-01-004	RBA-07-009	ENV-05-004	Workshop	NOI-04-013	PPA-02-004	PPA-03-013
16:20	RBA-06-014	RBA-01-005	RBA-07-010	ENV-05-005	Workshop	NOI-04-014	PPA-02-005	PPA-03-014
16:40	RBA-06-015	RBA-01-006	RBA-07-011		Workshop	NOI-04-015	PPA-02-006	PPA-08-001
17:00	RBA-06-016	RBA-01-007	RBA-07-012		Workshop	NOI-02-001	PPA-02-007	PPA-08-002
17:20	RBA-06-017	RBA-01-008	RBA-07-013		Workshop	NOI-02-002	PPA-02-008	PPA-08-003
17:40	RBA-06-018	RBA-01-009	RBA-07-014		Workshop	NOI-02-003	PPA-02-009	PPA-08-004
18:00	TECHNICAL DEMONSTRATION TD - 001 - ROOM L-201							
18:30	MUSICAL PERFORMANCE - AUDITORIUM A							

### Session S.03 - Tuesday 4th - Afternoon

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
15:00	ELE-01-010	COM-01-010	UNW-04-005	NLA-01-010	PHY-05-001	ULT-02-001		MUS-06-004
15:20	ELE-01-011	COM-02-001	UNW-04-006	NLA-01-011	PHY-05-002	ULT-02-002	ULT-09-009	MUS-06-005
15:40	ELE-01-012	COM-02-002	UNW-04-007	NLA-01-012	PHY-05-003	ULT-02-003	ULT-09-010	MUS-06-006
16:00	ELE-01-013	COM-02-003	UNW-04-008	NLA-01-013	PHY-05-004	ULT-02-004	ULT-09-011	MUS-06-007
16:20	ELE-01-014	COM-02-004	UNW-04-009	NLA-01-014	PHY-05-005	ULT-02-005	ULT-09-012	MUS-06-008
16:40	ELE-01-015	COM-02-005	UNW-04-010	NLA-01-015	PHY-04-001	ULT-04-001	ULT-09-013	MUS-06-009
17:00	ELE-01-016	COM-02-006	UNW-04-011	NLA-01-016	PHY-04-002	ULT-04-002	ULT-09-014	MUS-06-010
17:20	ELE-01-017	COM-02-007	UNW-04-012	NLA-01-017	PHY-04-003	ULT-04-003	ULT-13-001	MUS-06-011
17:40	ELE-01-018	COM-02-008	UNW-04-013	NLA-01-018	PHY-04-004	ULT-04-004	ULT-13-002	MUS-06-012
18:00	TECHNICAL DEMONSTRATION TD - 001 - ROOM L201							
18:30	MUSICAL PERFORMANCE - AUDITORIUM A							

### Session S.04 - Wednesday 5th - Morning

Hours	Rooms							
	L - 101	L - 102	L - 103	L - 201	L - 202	L - 203	L - 401	L - 402
09:00	RBA-06-019	RBA-01-010	RBA-07-015	ENV-01-001	ENV-11-001	NOI-02-004	PPA-02-010	PPA-08-005
09:20	RBA-06-020	RBA-01-011	RBA-07-016	ENV-01-002	ENV-11-002	NOI-02-005	PPA-02-011	PPA-08-006
09:40	RBA-06-021	RBA-01-012	RBA-07-017	ENV-01-003	ENV-11-003	NOI-02-006	PPA-02-012	PPA-08-007
10:00	RBA-06-022	RBA-01-013	RBA-07-018	ENV-01-004	ENV-11-004	NOI-02-007	PPA-02-013	PPA-08-008
10:20	RBA-06-023	RBA-01-014	RBA-07-019	ENV-01-005	ENV-11-005	NOI-02-008	PPA-02-014	PPA-08-009
10:40	RBA-06-024	RBA-01-015	RBA-07-020	ENV-01-006	ENV-11-006	NOI-02-009	PPA-02-015	PPA-08-010
11:00	RBA-06-025	RBA-01-016	RBA-07-021	ENV-01-007	ENV-11-007	NOI-01-001	PPA-02-016	PPA-09-008
11:20	RBA-06-026	RBA-01-017	RBA-07-022		ENV-11-008	NOI-01-002	PPA-02-017	PPA-09-001
11:40	RBA-06-027	RBA-01-018	RBA-07-023		ENV-11-009	NOI-01-003	PPA-02-018	PPA-09-003
12:00	PLENARY LECTURE PL-003 - AUDITORIUM A							
13:00	LUNCH BREAK							

### Session S.04 - Wednesday 5th - Morning

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
09:00	ELE-02-001	COM-03-001	NLA-10-001	NLA-08-001	PHY-04-005	ULT-10-001	ULT-13-003	MUS-01-001
09:20	ELE-02-002	COM-03-002	NLA-10-002	NLA-08-002	PHY-04-006	ULT-10-002	ULT-13-004	MUS-01-002
09:40	ELE-02-003	COM-03-003	NLA-10-003	NLA-08-003	PHY-04-007	ULT-10-003	ULT-13-005	MUS-01-003
10:00	ELE-02-004	COM-03-004	NLA-10-004	NLA-08-004	PHY-04-008	ULT-10-004	ULT-13-006	MUS-01-004
10:20	ELE-02-005	COM-03-005	SAV-01-001	NLA-08-005	PHY-06-001	ULT-10-005	ULT-13-007	MUS-01-005
10:40	ELE-02-006	COM-03-006	SAV-01-002	NLA-08-006	PHY-06-002	ULT-10-006	ULT-13-008	MUS-01-006
11:00	ELE-02-007	COM-04-001	SAV-01-003	NLA-08-007	PHY-06-003	ULT-10-007	ULT-13-009	MUS-01-007
11:20	ELE-02-008	COM-04-002	SAV-01-004	NLA-08-008	PHY-06-004	ULT-10-008	ULT-13-010	MUS-01-008
11:40	ELE-02-009	COM-04-003	SAV-01-005	NLA-08-009	PHY-06-005	ULT-10-009	ULT-13-011	MUS-01-009
12:00	PLENARY LECTURE PL-003 - AUDITORIUM A							
13:00	LUNCH BREAK							

### Session S.05 - Wednesday 5th - Afternoon

Hours	Rooms							
	L -101	L -102	L -103	L -201	L -202	L -203	L -401	L -402
15:00	RBA-06-028	RBA-04-001	RBA-07-024	ENV-09-001	ICA GA	NOI-01-004	PPA-02-019	PPA-09-004
15:20	RBA-06-029	RBA-04-002	RBA-07-025	ENV-09-002	ICA GA	NOI-01-005	PPA-02-020	PPA-09-005
15:40	RBA-06-030	RBA-04-003	RBA-07-026	ENV-09-003	ICA GA	NOI-01-006	PPA-02-021	PPA-09-006
16:00	RBA-06-031	RBA-04-004	RBA-07-027	ENV-09-004	ICA GA	NOI-01-007	PPA-02-022	PPA-09-007
16:20	RBA-06-032	RBA-04-005	RBA-07-028	ENV-09-005	ICA GA	NOI-01-008	PPA-02-023	PPA-09-002
16:40	RBA-06-033	RBA-04-006	RBA-03-001	ENV-09-006	ICA GA	NOI-01-009	PPA-02-024	PPA-09-009
17:00	RBA-06-034	RBA-04-007	RBA-03-002	ENV-09-007	ICA GA	NOI-01-010	PPA-02-025	PPA-09-010
17:20	RBA-06-035	RBA-04-008	RBA-03-003	ENV-09-008	ICA GA	RBA-07-029	PPA-02-026	PPA-09-011
17:40	RBA-06-036	RBA-04-009	RBA-03-004	ENV-09-009	ICA GA	RBA-07-030	PPA-02-027	PPA-09-012
18:00	TECHNICAL DEMONSTRATION TD - 002 - ROOM L-201							
18:30	MUSICAL PERFORMANCE - AUDITORIUM A							

### Session S.05 - Wednesday 5th - Afternoon

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
15:00	ELE-02-010	COM-06-001	SAV-01-006	NLA-08-010	PHY-06-006	ULT-10-010	ULT-17-001	MUS-01-010
15:20	ELE-02-011	COM-06-002	SAV-01-007	NLA-07-001	PHY-06-007	ULT-10-011	ULT-17-002	MUS-01-011
15:40	ELE-02-012	COM-06-003	SAV-01-008	NLA-07-002	PHY-07-001	ULT-10-012	ULT-17-003	MUS-01-012
16:00	ELE-02-013	COM-06-004	SAV-01-009	NLA-07-003	PHY-07-002	ULT-05-001	ULT-17-004	MUS-01-013
16:20	ELE-02-014	COM-06-005	SAV-01-010	NLA-07-004	PHY-07-003	ULT-05-002	ULT-17-005	MUS-01-014
16:40	ELE-03-001	COM-06-006	SAV-01-011	NLA-07-005	PHY-07-004	ULT-05-003	ULT-17-006	MUS-04-001
17:00	ELE-03-002	COM-06-007	SAV-01-012	NLA-07-006	PHY-07-005	ULT-05-004	ULT-17-007	MUS-04-002
17:20	ELE-03-003	COM-06-008	SAV-01-013	NLA-07-007	PHY-07-006	ULT-05-005	ULT-17-008	MUS-04-003
17:40	ELE-03-004	COM-06-009	SAV-01-014	NLA-07-008	PHY-07-007	ULT-05-006	ULT-17-009	MUS-04-004
18:00	TECHNICAL DEMONSTRATION TD - 002 - ROOM L-201							
18:30	MUSICAL PERFORMANCE - AUDITORIUM A							

### Session S.06 - Thursday 6th - Morning

Hours	Rooms							
	L - 101	L - 102	L - 103	L - 201	L - 202	L - 203	L - 401	L - 402
09:00	RBA-05-001	RBA-04-010	RBA-12-001	ENV-07-001	ENV-04-001	NOI-03-001	PPA-02-028	
09:20	RBA-05-002	RBA-04-011	RBA-12-002	ENV-07-002	ENV-04-002	NOI-03-002	PPA-02-029	
09:40	RBA-05-003	RBA-04-012	RBA-12-003	ENV-07-003	ENV-04-003	NOI-03-003	PPA-05-001	
10:00	RBA-05-004	RBA-04-013	RBA-12-004	ENV-07-004	ENV-04-004	NOI-03-004	PPA-05-002	
10:20	RBA-05-005	RBA-04-014	RBA-12-005	ENV-07-005	ENV-04-005	NOI-03-005	PPA-05-003	
10:40	RBA-05-006	RBA-08-001	RBA-12-006	ENV-07-006	ENV-04-006	NOI-07-001	PPA-05-004	
11:00	RBA-05-007	RBA-08-002	RBA-12-007	ENV-07-007	NOI-07-014	NOI-07-002	PPA-05-005	
11:20	RBA-05-008	RBA-08-003	RBA-12-008	ENV-07-008	NOI-07-015	NOI-07-003	PPA-05-006	
11:40	RBA-05-009	RBA-08-004	RBA-12-009	ENV-07-009	NOI-07-016	NOI-07-004	PPA-05-007	
12:00	PLENARY LECTURE PL-004 - AUDITORIUM A							
13:00	LUNCH BREAK							

### Session S.06 - Thursday 6th - Morning

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
09:00	ELE-03-005	COM-06-010	SAV-01-015	NLA-02-001	PHY-07-008	ULT-15-001	ULT-11-001	MUS-04-005
09:20	ELE-03-006	COM-06-011	SAV-02-001	NLA-02-002	PHY-07-009	ULT-15-002	ULT-11-002	MUS-04-006
09:40	ELE-03-007	COM-06-012	SAV-02-002	NLA-02-003	PHY-07-010	ULT-15-003	ULT-11-003	MUS-04-007
10:00	ELE-03-008	CAS-02-001	SAV-02-003	NLA-02-004	PHY-07-011	ULT-15-004	ULT-11-004	MUS-04-008
10:20	ELE-03-009	CAS-02-002	SAV-02-004	NLA-02-005	PHY-08-001	ULT-15-005	ULT-11-005	MUS-04-009
10:40	ELE-03-010	CAS-02-003	SAV-02-005	NLA-02-006	PHY-08-002	ULT-15-006	ULT-11-006	MUS-05-001
11:00	ELE-03-011	CAS-01-001	SAV-02-006	NLA-02-007	PHY-08-003	ULT-15-007	ULT-08-001	MUS-05-002
11:20	CAS-04-003	CAS-01-002	SAV-02-007	NLA-02-008	PHY-08-004	ULT-15-008	ULT-08-002	MUS-05-003
11:40		CAS-01-003	SAV-02-008	NLA-02-009	PHY-08-005	ULT-15-009	ULT-08-003	MUS-05-004
12:00	PLENARY LECTURE PL-004 - AUDITORIUM A							
13:00	LUNCH BREAK							

### Session S.07 - Thursday 6th - Afternoon

Hours	Rooms							
	L -101	L -102	L -103	L -201	L -202	L -203	L -401	L -402
15:00	RBA-05-010	RBA-08-005	RBA-12-010	ENV-08-001	RBA-16-001	NOI-05-001	PPA-05-008	
15:20	RBA-05-011	RBA-08-006	RBA-12-011	ENV-08-002	RBA-16-002	NOI-05-002	PPA-05-009	
15:40	RBA-05-012	RBA-08-007	RBA-12-012	ENV-08-003	RBA-16-003	NOI-05-003	PPA-05-010	
16:00	RBA-05-013	RBA-08-008	RBA-12-013	ENV-08-004	RBA-16-004	NOI-05-004	PPA-05-011	
16:20	RBA-05-014	RBA-08-009	RBA-12-014	ENV-08-005	RBA-16-005	NOI-05-005	PPA-06-001	
16:40	RBA-05-015	RBA-08-010	RBA-14-001	ENV-08-006	RBA-16-006	NOI-05-006	PPA-06-002	
17:00	RBA-05-016	RBA-09-001	RBA-14-002	ENV-08-007	RBA-16-007	NOI-05-007	PPA-06-003	
17:20	RBA-05-017	RBA-09-002	RBA-14-003	ENV-08-008	RBA-16-008	NOI-05-008	PPA-06-004	
17:40	RBA-05-018	RBA-09-003	RBA-14-004	ENV-08-009	RBA-16-009	NOI-05-009	PPA-06-005	
18:00	TECHNICAL DEMONSTRATION TD - 003 - ROOM L201							
19:30	DEPARTURE FOR THE CONGRESS DINNER							

### Session S.07 - Thursday 6th - Afternoon

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
15:00	ELE-04-001	CAS-01-004	SAV-03-001	NLA-04-001	PHY-08-006	ULT-15-010	ULT-08-004	MUS-05-005
15:20	ELE-04-002	CAS-03-001	SAV-03-002	NLA-04-002	PHY-08-007	ULT-15-011	ULT-08-005	MUS-05-006
15:40	ELE-04-003	CAS-03-002	SAV-03-003	NLA-04-003	PHY-08-008	ULT-15-012	ULT-08-006	MUS-05-007
16:00	ELE-04-004	CAS-03-003	SAV-03-004	NLA-04-004	PHY-08-009	ULT-15-013		MUS-05-008
16:20	ELE-04-005	CAS-03-004	SAV-03-005	NLA-04-005	PHY-08-010	ULT-15-014	ULT-03-001	MUS-05-009
16:40	ELE-04-006	CAS-03-005	SAV-03-006	NLA-04-006	PHY-08-011	ULT-16-001	ULT-03-002	MUS-05-010
17:00	ELE-04-007	CAS-03-006	SAV-03-007	NLA-05-001	PHY-08-012	ULT-16-002	ULT-03-003	MUS-05-011
17:20	ELE-04-008	CAS-03-007	SAV-03-008	NLA-05-002	PHY-08-013	ULT-16-003	ULT-03-004	MUS-05-012
17:40	ELE-04-009	CAS-03-008	SAV-03-009	NLA-05-003	PHY-08-014	ULT-16-004	ULT-03-005	MUS-05-013
18:00	ELE-04-015	TECHNICAL DEMONSTRATION TD - 003 - ROOM L-201				ULT-16-008		
19:30	DEPARTURE FOR THE CONGRESS DINNER							

### Session S.08 - Friday 7th - Morning

Hours	Rooms							
	L - 101	L - 102	L - 103	L - 201	L - 202	L - 203	L - 401	L - 402
09:00	RBA-11-001	RBA-09-004	RBA-14-005	ENV-08-010	RBA-16-010	NOI-07-005	PPA-06-006	TNA-07-001
09:20	RBA-11-002	RBA-09-005	RBA-14-006	ENV-08-011	RBA-16-011	NOI-07-006	PPA-06-007	TNA-07-002
09:40	RBA-11-003	RBA-09-006	RBA-14-007	ENV-08-012	RBA-16-012	NOI-07-007	PPA-06-008	TNA-07-003
10:00	RBA-11-004	RBA-09-007	RBA-14-008	ENV-08-013	RBA-16-013	NOI-07-008	PPA-06-009	TNA-07-004
10:20	RBA-11-005	RBA-09-008	RBA-14-009	ENV-06-001	RBA-16-014	NOI-07-009	PPA-06-010	TNA-07-005
10:40	RBA-11-006	RBA-09-009	RBA-14-010	ENV-06-002		NOI-07-010		TNA-07-006
11:00	RBA-11-007	RBA-09-010	RBA-14-011	ENV-06-003		NOI-07-011		TNA-07-007
11:20	RBA-11-008	RBA-09-011	RBA-14-012	ENV-06-004		NOI-07-012		TNA-07-008
11:40	RBA-11-009	RBA-09-012	RBA-14-013	ENV-06-005		NOI-07-013		TNA-07-009
12:00	PLENARY LECTURE PL- 005 - AUDITORIUM A							
13:00	CLOSING ACT - AUDITORIUM A							
13:30	FAREWELL COCKTAIL & TAPAS							

### Session S.08 - Friday 7th - Morning

Hours	Rooms							
	R-101	R-102	R-103	R-201	R-202	R-203	R-204	R-401
09:00	PHY-08-024	CAS-03-009	SAV-03-010	NLA-06-001	PHY-08-015	ULT-16-005	ULT-12-001	MUS-07-001
09:20	COM-06-013	CAS-03-010	SAV-03-011	NLA-06-002	PHY-08-016	ULT-16-006	ULT-12-002	MUS-07-002
09:40	NLA-10-005	CAS-03-011	CAS-04-001	NLA-06-003	PHY-08-017	ULT-16-007	ULT-12-003	MUS-07-003
10:00	NLA-10-006	CAS-03-012	CAS-04-002	NLA-06-004	PHY-08-018	ULT-17-010	ULT-12-004	MUS-07-004
10:20	NLA-10-007	CAS-03-013	CAS-04-004	NLA-06-005	PHY-08-019	ULT-17-011	ULT-12-005	MUS-07-005
10:40	NLA-10-008	CAS-03-014	BIO-03-004	NLA-06-006	PHY-08-020	ULT-17-012	ULT-12-006	MUS-07-006
11:00		CAS-03-015	BIO-03-005	NLA-06-007	PHY-08-021	ULT-17-013	ULT-12-007	MUS-07-007
11:20		CAS-03-016	BIO-03-006	NLA-06-008	PHY-08-022	ULT-17-014	ULT-12-008	MUS-07-008
11:40		CAS-03-017		NLA-06-009	PHY-08-023	ULT-17-015	ULT-12-009	MUS-07-009
12:00	PLENARY LECTURE PL-005 - AUDITORIUM A							
13:00	CLOSING ACT - AUDITORIUM A							
13:30	FAREWELL COCKTAIL & TAPAS							

## 10.2.6.1 Poster Session

## POSTER SESSIONS

Board No.	Tuesday 4th		Wednesday 5th		Thursday 6th	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
1	BIO-02-004	ELE-03-012	MUS-07-023	PHY-08-028	RBA-07-032	ULT-10-019
2	CAS-01-005	ELE-04-010	NLA-02-010	PHY-08-029	RBA-07-033	ULT-10-020
3	CSA-01-006	ELE-04-011	NLA-02-011	PPA-02-030	RBA-07-034	ULT-12-010
4	CAS-01-007	ELE-04-012	NLA-03-005	PPA-02-031	RBA-09-013	ULT-12-011
5	CAS-01-008	ELE-04-013	NLA-04-007	PPA-03-015	RBA-11-010	ULT-13-012
6	CAS-03-018	ELE-04-014	NLA-06-010	PPA-04-006	RBA-11-011	ULT-13-013
7	CAS-03-019	ENV-01-008	NLA-10-009	PPA-04-007	RBA-13-007	ULT-13-014
8	CAS-03-020	ENV-01-009	NLA-10-010	PPA-05-012	RBA-15-010	ULT-13-015
9	CAS-03-021	ENV-02-010	NLA-10-011	PPA-05-013	RBA-15-011	ULT-13-016
10	CAS-03-022	ENV-03-006	NLA-10-012	PPA-05-014	RBA-15-012	ULT-14-012
11	CAS-03-023	ENV-03-007	NOI-02-010	PPA-05-015	SAV-01-016	ULT-14-013
12	CAS-03-024	ENV-03-008	NOI-02-011	PPA-05-016	SAV-01-017	ULT-15-015
13	CAS-03-025	ENV-06-006	NOI-03-006	PPA-05-017	SAV-01-018	ULT-15-016
14	CAS-03-026	ENV-07-010	NOI-03-007	PPA-06-011	SAV-01-019	ULT-15-017
15	CAS-03-027	ENV-07-011	NOI-03-008	PPA-07-018	SAV-02-009	ULT-15-018
16	CAS-03-028	ENV-07-012	NOI-03-009	PPA-08-011	SAV-02-010	ULT-15-019
17	CAS-03-029	ENV-08-014	NOI-03-010	PPA-08-012	SAV-03-012	ULT-17-016
18	CAS-03-030	ENV-08-015	NOI-03-011	PPA-09-013	SAV-03-013	ULT-17-017
19	CAS-03-031	ENV-10-009	NOI-04-016	PPA-09-014	SAV-03-014	ULT-17-018
20	CAS-03-032	ENV-10-010	NOI-04-017	PPA-09-015	SAV-03-015	ULT-17-019
21	CAS-03-033	ENV-11-010	NOI-05-010	PPA-09-016	SAV-03-016	ULT-17-020
22	CAS-03-034	MUS-02-010	NOI-07-017	RBA-01-019	ULT-02-006	ULT-17-021
23	CAS-03-035	MUS-02-011	NOI-07-018	RBA-01-020	ULT-02-007	ULT-17-022
24	CAS-03-036	MUS-05-014	PHY-02-004	RBA-02-010	ULT-04-005	ULT-17-023
25	CAS-03-037	MUS-07-010	PHY-02-005	RBA-03-006	ULT-05-007	UNW-02-006
26	CAS-03-038	MUS-07-011	PHY-06-008	RBA-03-007	ULT-07-008	UNW-02-007
27	CAS-03-039	MUS-07-012	PHY-06-009	RBA-03-008	ULT-07-009	UNW-04-014
28	CAS-03-040	MUS-07-013	PHY-06-010	RBA-03-009	ULT-09-015	UNW-04-015
29	CAS-03-041	MUS-07-014	PHY-06-011	RBA-03-010	ULT-09-016	UNW-04-016
30	CAS-04-005	MUS-07-015	PHY-06-012	RBA-05-022	ULT-09-017	UNW-04-017
31	CAS-04-006	MUS-07-016	PHY-06-013	RBA-05-023	ULT-10-013	
32	CAS-04-007	MUS-07-017	PHY-06-014	RBA-05-024	ULT-10-014	
33	CAS-04-008	MUS-07-018	PHY-06-015	RBA-06-037	ULT-10-015	
34	COM-01-011	MUS-07-019	PHY-07-012	RBA-06-038	ULT-10-016	
35	COM-06-014	MUS-07-020	PHY-08-025	RBA-06-039	ULT-10-017	
36	ELE-01-019	MUS-07-021	PHY-08-026	RBA-07-031	ULT-10-018	
37	ENV-01-010	MUS-07-022	PHY-08-027		ULT-08-007	



### 10.3. Technical Programme

Structured Session Coordinators: Antonio Pérez-López; Michael Vorländer

#### BIO – Bioacoustics

##### BIO-01 – Animal acoustics

- BIO-01-001. Investigations on the structure of fish stocks in Ataturk Dam lake by using classical and acoustical approaches  
*Akoglu, Ekin; Gucu, Ali Cemal*  
S.01 Monday 3rd - 15:00 - Room R-101
- BIO-01-002. Vibrations: Pathway to understanding termite foraging behaviour  
*Lai, Joseph CS.; Evans, Theodore, A.; Inta, Ra*  
S.01 Monday 3rd - 15:20 - Room R-101
- BIO-01-003. Experimental and numerical analysis of the frequency response of the cuvier´s ziphius mandible and the mandibular fat bodies  
*Militello, Carmelo, Guadalupe, Viana, V. Correa, Santiago, Buenafuente, S., Martín I, Recuero, Manuel*  
S.01 Monday 3rd - 15:40 - Room R-101

##### BIO-02 – Auditory neuroscience and bioacoustics

Session Organizer: *Mardi C. Hastings*

- BIO-02-001. Vibration characteristics of dry human skull using scanning laser doppler vibrometer  
*Romuald Bolejko, Andrzej B. Dobrucki*  
S.01 Monday 3rd - 16:00 - Room R-101
- BIO-02-002. Heat-stress actuated protective mechanism of the inner ear against noise-induced hearing loss  
*Murakoshi, Michio; Kitsunai, Yoko; Yoshida, Naohiro; Iida, Koji; Kumano, Shun; Kobayashi, Toshimitsu; Wada, Hiroshi*  
S.01 Monday 3rd - 16:20 - Room R-101
- BIO-02-003. Mostly malleus: Ground sound detection by the remarkable ear of the golden mole  
*Narins, Peter M.; Willi, Urban B.*  
S.01 Monday 3rd - 16:40 - Room R-101
- BIO-02-004. Assessments of bone-conducted ultrasonic hearing-aid (bcuha) by europsychological measurements  
*Nakagawa, Seiji*  
Poster - Tuesday 4th morning - Board 01

##### BIO-03 – Marine bioacoustics

Session Organizer: *Manuel Castellote*

- BIO-03-001. Birth prediction using acoustics in captive beluga whales  
*Azorín, María del Mar; Castellote, Manuel; Esteban, José Antonio*  
S.01 Monday 3rd - 17:00 - Room R-101
- BIO-03-002. The temporal structure of the echo for the fish identification by using the broadband sonar signal  
*Matsuo, Ikuo; Imaizumi, Tomohito; Furusawa, Masahiko; Akamatsu, Tomonari; Nishimori, Yasushi; Ogawa, Shinji*  
S.01 Monday 3rd - 17:20 - Room R-101
- BIO-03-003. Temporal order discrimination by a bottlenose dolphin is not affected by stimulus frequency spectrum variation  
*Zaslavski, Gennadi*  
S.01 Monday 3rd - 17:40 - Room R-101
- BIO-03-004-IP. Sound production of neonate captive beluga whales  
*Castellote, Manuel; Vergara, Valeria; Barret-Lennard, Lance G.; Esteban, José A.*  
S.08 Friday 7th - 10:40 - Room R-103

- BIO-03-005. Mathematical modeling of dolphin clicks source  
*Dubrovskiy, Nikolay; Urusovskiy Igor*  
S.08 Friday 7th - 11:00 - Room R-103
- BIO-03-006-IP. On the use of broadband signals for the acoustical characterisation of the gilt-head sea bream  
*Ester Soliveres, Víctor Espinosa, Eva Escuder, Jesús Alba, Javier Redondo, Miguel Ardida, Silvia Martínez, Miguel Jover, Vicent D. Estruch*  
S.08 Friday 7th - 11:20 - Room R-103

## **CAS – Communication Acoustics, including Speech**

### **CAS-01 – Communication Acoustics**

- CAS-01-001. Toward the evaluation of speech quality impact on users' behaviour through a recognition dual task  
*Durin, Virginie; Gros, Laetitia*  
S.06 Thursday 6th - 11:00 - Room R-102
- CAS-01-002. A new approach to achieve a better auditory perception into remote videocon-ference rooms  
*Mato-Méndez, Fernando José; Sobreira-Seoane, Manuel; Torres-Guijarro, Marisol*  
S.06 Thursday 6th - 11:20 - Room R-102
- CAS-01-003. Speech recognition in classroom noise by school-age children  
*Picard, Michel*  
S.06 Thursday 6th - 11:40 - Room R-102
- CAS-01-004. Speech enhancement based on time-domain \_filter and time- frequency \_filter  
*Abe, Tomomi; Matsumoto, Mitsuharu; Hashimoto, Shuji*  
S.07 Thursday 6th - 15:00 - Room R-102
- CAS-01-005. User authentication using the personal auditory characteristics  
*Sonoda, Kotaro; Asemi, Noriaki; Nakazato, Junji; Yoshioka, Katsunari; Inoue, Daisuke; Takizawa, Osamu*  
Poster - Tuesday 4th morning - Board 02
- CAS-01-006. Reduction method of side information for packet loss concealment based on spectrum stripe coding  
*Suzuki, Motoyuki; Sakai, Toshiyuki; Ito, Akinori; Makino, Shozo*  
Poster - Tuesday 4th morning - Board 03
- CAS-01-007. Preference of the transfer functions for music recording in a coherent region of a reverberant field  
*Yoshifumi Hara; Yoshinori Takahashi; Hiroaki Nomura; Mikio Tohyama; Kazunori Miyoshi*  
Poster - Tuesday 4th morning - Board 04
- CAS-01-008. Development of small sound equipment with micro-dynamic-type loudspeakers for HRTF measurement  
*Yoshihide, Hayakawa; Takanori, Nishino; Kazuya, Takeda*  
Poster - Tuesday 4th morning - Board 05

### **CAS-02 – Oto-acoustic emission**

*Session Organizer: Dorte Hammershøi*

- CAS-02-001-IP. Artifact rejection of distortion product otoacoustic emissions measured after sound exposure  
*Reuter, Karen; Ordoñez, Rodrigo; Aranda de Toro, Miguel Angel, Hammershøi, Dorte*  
S.06 Thursday 6th - 10:00 - Room R-102
- CAS-02-002. Contralateral suppression of distortion product otoacoustic emission in humans  
*Ozimek, Edward; Wicher, Andrzej*  
S.06 Thursday 6th - 10:20 - Room R-102
- CAS-02-003. Optimization of distortion product otoacoustic emission (DPOAE) measurements with the commercial system ILO96  
*Aranda de Toro, Miguel Angel; Ordoñez, Rodrigo; Hammershøi, Dorte*  
S.06 Thursday 6th - 10:40 - Room R-102

### CAS-03 – Speech acoustics

- CAS-03-001. Modelling of the human-machine dialogue in dual language  
*R. Djeradi, A. Djeradi, J. Caelen*  
S.07 Thursday 6th - 15:20 - Room R-102
- CAS-03-002. Design of a Chilean voices database by means of a telephonic interface  
*Grez, Guillermo, Recuero, Manuel*  
S.07 Thursday 6th - 15:40 - Room R-102
- CAS-03-003. Acoustic features of disordered voices under vocal fold pathology  
*Aguilar Neto, Benedito G.; Costa, Silvana C.; Fechine, Joseana M.; Muppa, Menaka*  
S.07 Thursday 6th - 16:00 - Room R-102
- CAS-03-004. Experimental validation of simplified free jet turbulence models applied to the vocal tract  
*Grandchamp, Xavier; Van Hirtum, Annemie; Pelorson, Xavier*  
S.07 Thursday 6th - 16:20 - Room R-102
- CAS-03-005. Articulatory feature estimation for nonstationary vowels based on a local vector coding  
*Ito, Masashi; Yano, Masafumi*  
S.07 Thursday 6th - 16:40 - Room R-102
- CAS-03-006. Time-scaling of consonant-vowel transitions using harmonic-plus-noise model for improving speech perception by listeners with moderate sensorineural impairment  
*Jayan, A. R.; Pandey, Prem C.; Lehana, Parveen K.*  
S.07 Thursday 6th - 17:00 - Room R-102
- CAS-03-007. Russian speech recognition model with morphemic analysis and synthesis  
*Karpov, Alexey; Ronzhin, Andrey*  
S.07 Thursday 6th - 17:20 - Room R-102
- CAS-03-008. Speech compression using discrete hermite transform  
*Hossein Marvi*  
S.07 Thursday 6th - 17:40 - Room R-102
- CAS-03-009. Speech intelligibility of two groups of cordectomized  
*Miralles, J.L.; Garrigues, J.V.; Romero, J.; Cerdá, S.; Giménez, A.; Cibrián, R.*  
S.08 Friday 7th - 09:00 - Room R-102
- CAS-03-010. A study of vocal tract area functions for speech synthesis system based on transmission line model  
*Ogata, Kohichi; Yang, Bing*  
S.08 Friday 7th - 09:20 - Room R-102
- CAS-03-011. Surface modeling of vocal tract shapes in transition segments of vowel-consonant-vowel syllables for estimation of place of closure  
*Shah, Milind S.; Pandey, Prem C.*  
S.08 Friday 7th - 09:40 - Room R-102
- CAS-03-012. Harmonics – to – noise ratio in ika Igbo and English utterances: implications and inferences  
*Uguru, Joy Oluchi*  
S.08 Friday 7th - 10:00 - Room R-102
- CAS-03-013. Polish sentence test for speech intelligibility measurements in masking conditions  
*Ozimek, Edward; Kutzner, Dariusz; Sk, Aleksander; Wicher, Andrzej*  
S.08 Friday 7th - 10:20 - Room R-102
- CAS-03-014. Detection of musical scale from speech  
*Bosu, Orpita; Datta, Asoke*  
S.08 Friday 7th - 10:40 - Room R-102

- CAS-03-015. Perceptual impression to same utterances with various speech styles  
*Yasukazu Kanamori; Mayo Noda*  
**S.08 Friday 7th - 11:00 - Room R-102**
- CAS-03-016. Experimental Validation of Direct and Inverse Glottal Flow Models for Unsteady Flow Conditions and Glottal Closure  
*Cisonni, Julien; Van Hirtum, Annemie; Willems, Jan; Pelorson, Xavier*  
**S.08 Friday 7th - 11:20 - Room R-102**
- CAS-03-017. The influence of linguistic and extra-linguistic information on synthetic speech intelligibility  
*Gardzielewska, Hanna*  
**S.08 Friday 7th - 11:40 - Room R-102**
- CAS-03-018. Detection and direction estimation of calling voice  
*Ito, Akinori; Kitadate, Kota; Suzuki, Motoyuki; Makino, Shozo*  
**Poster - Tuesday 4th morning - Board 06**
- CAS-03-019. Robust Harmonic complex estimation in noise  
*Krijnders, Dirkjan; Niessen, Maria; Andringa, Tjeerd*  
**Poster - Tuesday 4th morning - Board 07**
- CAS-03-020. Assessing the reverberation level in speech  
*Niessen, Maria; Krijnders, Dirkjan; Boers, Joep; Andringa, Tjeerd*  
**Poster - Tuesday 4th morning - Board 08**
- CAS-03-021. A numerical experiment on waveform fluctuation within the larynx  
*Nomura, Hideyuki; Funada, Tetsuo*  
**Poster - Tuesday 4th morning - Board 09**
- CAS-03-022. A cross-linguistic perceptual and acoustical study of speaker discrimination in film dubbing  
*Payri, Blas; Enríquez Carrasco, Emilia V.; Redondo, Javier; Picó, Rubén*  
**Poster - Tuesday 4th morning - Board 10**
- CAS-03-023. Data hiding in speech signals on the basis of the modification of segment pitch and duration  
*Ponomar, Marina*  
**Poster - Tuesday 4th morning - Board 11**
- CAS-03-024. Effects of FO range and contours in speech upon the image of speakers' personality  
*Uchida, Teruhisa*  
**Poster - Tuesday 4th morning - Board 12**
- CAS-03-025. Analysis of peak contours in different segmental and suprasegmental contexts  
*Wagner, Agnieszka*  
**Poster - Tuesday 4th morning - Board 13**
- CAS-03-026. Experimental validation and physical modelling of vocal folds pathologies  
*Ruty, Nicolas; Brutel-Vuilmet, Claire; Pelorson, Xavier; Van Hirtum, Annemie*  
**Poster - Tuesday 4th morning - Board 14**
- CAS-03-027. Behavior of the spectral envelope of the vocal tract in front of a variation of the source parameters  
*Falek, Lila; Djeradi Amar*  
**Poster - Tuesday 4th morning - Board 15**
- CAS-03-028. Locus equation for arabic guturals  
*O., Bouferroum, L. Falek, A. Djeradi*  
**Poster - Tuesday 4th morning - Board 16**
- CAS-03-029. Locus equation of arabic consonants preceded by middle vowel compared to when preceded by front or back vowel  
*O. Bouferroum, L. Falek, A. Djeradi*  
**Poster - Tuesday 4th morning - Board 17**

- CAS-03-030. A real-time lecture captioning system using speech recognition technology for hearing-impaired students  
*Isono, Haruo; Irikura, Keisuke; Yamaguchi Junpei*  
**Poster - Tuesday 4th morning - Board 18**
- CAS-03-031. A New Architecture and Approaches to Improve a Subword-Based Open Vocabulary Spoken Document Retrieval System  
*Yoshiaki, Itoh; Kohei, Iwata; Kazunori, Kojima; Masaaki, Ishigame; Kazuyo, Tanaka; Shi-wook, Lee*  
**Poster - Tuesday 4th morning - Board 19**
- CAS-03-032. Auditory representation of spectral intensity variation in coarticulated vowels  
*Jacewicz, Ewa; Fox, Robert Allen*  
**Poster - Tuesday 4th morning - Board 20**
- CAS-03-033. Spectral integration of virtual cues in speech perception  
*Fox, Robert Allen; Jacewicz, Ewa; Wackler, Lisa*  
**Poster - Tuesday 4th morning - Board 21**
- CAS-03-034. Spontaneous speech recognition using discrete-mixture HMMS  
*Kosaka, Tetsuo; Katoh, Masaharu; Kohda, Masaki*  
**Poster - Tuesday 4th morning - Board 22**
- CAS-03-035. Estimation of area function using pressure contours and sound intensity in 3-d vocal tract  
*Nakai, Takayoshi; Mochizuki, Keita*  
**Poster - Tuesday 4th morning - Board 23**
- CAS-03-036. A study of suitable reverberation criteria for distant-talking speech recognition with room acoustic parameters  
*Nishiura, Takanobu; Hirano, Yoshiki; Denda, Yuki; Nakayama, Masato*  
**Poster - Tuesday 4th morning - Board 24**
- CAS-03-037. Enhancing speech in reverberation by steady-state suppression  
*Kei Takahashi; Keiichi Yasu; Nao Hodoshima; Takayuki Arai; Kiyohiro Kurisu*  
**Poster - Tuesday 4th morning - Board 25**
- CAS-03-038. Continuous time-frequency coordinate mapping with sparse anchoring templates and its application to auditory morphing  
*Takahashi, Toru; Irino, Toshio; Kawahara, Hideki*  
**Poster - Tuesday 4th morning - Board 26**
- CAS-03-039. Disordered Speech Assessment Using Different Speech  
*Zlatnik, Petr; Cmejla, Roman*  
**Poster - Tuesday 4th morning - Board 27**
- CAS-03-040. Speech segmentation on subphonemic segments aimed to the speech pathology analysis  
*Saric, Zoran; Jovicic, Slobodan; Bilibajkic, Ruzica*  
**Poster - Tuesday 4th morning - Board 28**
- CAS-03-041. Perceptual impresión to same utterances with vaious speech styles  
*Yasukazu Kanamori; Mayo Noda*  
**Poster - Tuesday 4th morning - Board 29**
- CAS-04 – CAS-General**
- CAS-04-001. Teaching acoustics using IHAS open-source TLM-package Lambda  
*Matthias Blau*  
**S.08 Friday 7th - 09:40 - Room R-103**
- CAS-04-002. Synchronization of acoustic speech data for machine learning based audio to visual conversion  
*Takács, György; Tihanyi, Attila; Feldhoffer, Gergely; Bárdi, Tamás; Oroszi, Balázs*  
**S.08 Friday 7th - 10:00 - Room R-103**

- CAS-04-003. Substantial difference between the dynamic characteristics of the middle ear in infants and those in adults  
*Wada, Hiroshi; Yoshimura, Yusuke; Sugaya, Mitsuki; Suzuki, Takashi; Hamanishi, Shinji; Nakae, Nobuyoshi; Matsutani, Sachiko; Kobayashi, Toshimitsu*  
S.6 Thursday 6 th – 11:20 – Room R-101
- CAS-04-004. An image processing approach to cochleograms  
*Krijnders, Dirkjan; van der Zant, Tijn; Haak, Koen; Andringa, Tjeerd; Schomaker, Lambert*  
S.08 Friday 7th - 10:20 - Room R-103
- CAS-04-005. Speech data base of the massenrempulu language in the south sulawesi province in Indonesia  
*Nakashima, Hirotake; Sawada, Yusuke*  
Poster - Tuesday 4th morning - Board 30
- CAS-04-006. Numerical simulation of attenuation characteristics of soft-tissue conducted sound originated from vocal tract  
*Otani, Makoto; Hirahara, Tatsuya; Adachi, Seiji*  
Poster - Tuesday 4th morning - Board 31
- CAS-04-007. 3 Dimensional Sound Source Localization Using a Distributed Microphones System  
*Cho, Kook; Nishiura, Takano; Yamashita, Yoichi*  
Poster - Tuesday 4th morning - Board 32
- CAS-04-008. Improvement of the Speech Recognition under the Noisy Environment using the Savitzky-Golay smoothing filter  
*Yoichi, Midorikawa; Masanori, Akita*  
Poster - Tuesday 4th morning - Board 33

#### **COM – Computational Acoustics**

##### **COM-01 – Advances and applications of computational methods for sound radiation and scattering**

*Session Organizer: Andrew Peplow*

- COM-01-001-IP. A FE/FMBE-Coupling to model the interaction of an absorbing material with a surrounding fluid  
*Schneider, Stefan*  
S.02 Tuesday 4th - 09:00 - Room R-102
- COM-01-002-IP. Adaptive sampling for frustum-based sound propagation in complex and dynamic environments  
*Lauterbach, Christian; Chandak, Anish; Manocha, Dinesh*  
S.02 Tuesday 4th - 09:20 - Room R-102
- COM-01-003. Fast integral equation algorithm for large scale simulation of acoustic field propagation in biological tissues  
*Bleszynski, E.; Bleszynski, M.; Jaroszewicz, T.*  
S.02 Tuesday 4th - 09:40 - Room R-102
- COM-01-004. A general procedure for selecting suitable equivalent monopole sets for rigid body scattering problems  
*Gounot, Yves J. R.; Musafir, Ricardo E.*  
S.02 Tuesday 4th - 10:00 - Room R-102
- COM-01-005. Efficient and Stable Acoustic Tomography Using Sparse Reconstruction Methods  
*Jovanovic, Ivana; Hormati, Ali; Sbaiz, Luciano; Vetterli, Matrin*  
S.02 Tuesday 4th - 10:20 - Room R-102
- COM-01-006. Modeling radiation synthesis with spherical loudspeaker arrays  
*Franz Zotter; Robert Höldrich*  
S.02 Tuesday 4th - 10:40 - Room R-102
- COM-01-007. Modelling sound radiation using a vibrating wall excited by an impact load: A bem approach  
*Santos, Paulo; Mateus, Diogo*  
S.02 Tuesday 4th - 11:00 - Room R-102

- COM-01-008. Simple model of porous material for FDTD method  
*Hisaharu Suzuki, Akira Omoto and Kyoji Fujiwara*  
S.02 Tuesday 4th - 11:20 - Room R-102
- COM-01-009. Computer simulation of room reverberation  
*Noha Korany*  
S.02 Tuesday 4th - 11:40 - Room R-102
- COM-01-010. Dynamic imaging on broadband sound source using CAVSPAC  
*Shimoyama, Ryuichi*  
S.03 Tuesday 4th - 15:00 - Room R-102
- COM -01-011. Combination of Acoustical Wave Propagator with Perfectly Matched Layer  
*Jing Lu, Zhibin Lin, Xiaoqin Chen, Boling Xu*  
Poster - Tuesday 4th morning - Board 34
- COM-02 – Boundary element methods in acoustics**  
*Session Organizer: Antoine Lavie*
- COM-02-001-IP. Fast Multipole Method for Acoustic Computations  
*Parot, Jean-Marc; Pellicier, Antoine*  
S.03 Tuesday 4th - 15:20 - Room R-102
- COM-02-002. Acoustic boundary element method formulation with treatment of nearly singular integrands by element subdivision  
*Cutanda Henriquez, Vicente; Juhl, Peter*  
S.03 Tuesday 4th - 15:40 - Room R-102
- COM-02-003. A methodology for optimum design of Y-shape noise barriers  
*Aznarez, Juan José; Greiner, David; Maeso, Orlando; Winter, Gabriel*  
S.03 Tuesday 4th - 16:00 - Room R-102
- COM-02-004. Inverse Boundary Element Calculations based on structural modes  
*Juhl, Peter Møller*  
S.03 Tuesday 4th - 16:20 - Room R-102
- COM-02-005. Sound transmission analysis provided by a single panel in the presence of an elastic interlayer  
*Pereira, Andreia; Tadeu, António*  
S.03 Tuesday 4th - 16:40 - Room R-102
- COM-02-006. A numerical study of the influence of sound level meter case  
*Rodríguez Molares, Alfonso; Sobreira Seoane, Manuel A.*  
S.03 Tuesday 4th - 17:00 - Room R-102
- COM-02-007. Boundary element method for the estimation of noise barrier insertion losses  
*Waubke Holger, Chen Zhensheng, Kreuzer Wolfgang*  
S.03 Tuesday 4th - 17:20 - Room R-102
- COM-02-008. High frequency acoustics simulations via fmm accelerated Bem  
*Gumerov, Nail A.; Duraiswami, Ramani*  
S.03 Tuesday 4th - 17:40 - Room R-102
- COM-03 – Computational methods in combustion noise**  
*Session Organizers: Martin Ochmann; Rafael Piscoya*
- COM-03-001-IP. Computational Method on Prediction of Combustion Noise  
*F. Zhang, P.Habisreuther, M. Hettel and H. Bockhorn*  
S.04 Wednesday 5th - 09:00 - Room R-102
- COM-03-002. Zonal Approaches for the Simulation of Indirect Combustion Noise  
*Richter, Christoph; Thiele, Frank*  
S.04 Wednesday 5th - 09:20 - Room R-102

- COM-03-003.IP. Determination of the Sound Radiation of Turbulent Flames Using an Integral Method  
*Piscoya, Rafael; Ochmann, Martin*  
S.04 Wednesday 5th - 09:40 - Room R-102
- COM-03-004.IP. Calculation of acoustic radiation of an open turbulent flame with a transient boundary element method  
*Stütz, Michael; Ochmann, Martin*  
S.04 Wednesday 5th - 10:00 - Room R-102
- COM-03-005.IP. Validation of a model for premixed combustion noise with optical measurement techniques  
*Winkler, Anton; Wäsle, Johann; Hirsch, Christoph; Sattelmayer Thomas;*  
S.04 Wednesday 5th - 10:20 - Room R-102
- COM-03-006. Improvement of the spectrofilter - Separation of coherent sources overlapping in time and frequency domains  
*Pruvost, Laurent; Leclère, Quentin; Parizet, Etienne*  
S.04 Wednesday 5th - 10:40 - Room R-102
- COM-04 – Computational methods in fluid-structure interaction**  
*Session Organizer: Pablo Garcia-Fogeda*
- COM-04-001.IP. An approach for characterizing the aerodynamics/structure coupling at the aircraft design stage in the presence of structural nonlinearities  
*Arévalo Lozano, Félix*  
S.04 Wednesday 5th - 11:00 - Room R-102
- COM-04-002. Modelling structural acoustic transmission in waveguides  
*Peplow, Andrew; Finnveden, Svante*  
S.04 Wednesday 5th - 11:20 - Room R-102
- COM-04-003. Acoustic transmission characteristics of closed flexible structures using FEM/BEM coupling  
*Sunggyu Won; Weui Bong Jeong*  
S.04 Wednesday 5th - 11:40 - Room R-102
- COM-05 – Numerical simulation of cavities and indoor spaces**  
*Session Organizer: Andreas Franck*
- COM-05-001. Sound field analysis of rooms with the finite element method  
*Wernberg, Per-Anders; Sandberg, Góran*  
S.01 Monday 3rd - 15:00 - Room R-102
- COM-05-002. Prediction of low-frequency sound-pressure fields in rooms with obstacles  
*Chan, Gary; Hodgson, Murray; Valeau, Vincent*  
S.01 Monday 3rd - 15:20 - Room R-102
- COM-05-003.IP. Accuracy of direct frequency response analysis in sound field of a cavity using finite element method by comparison with modal frequency response analysis  
*Otsuru, Toru; Okamoto, Noriko; Okuzono, Takeshi; Kondo, Takayuki; Kuragi, Yuka*  
S.01 Monday 3rd - 15:40 - Room R-102
- COM-05-004.IP. Wall structure modeling for room acoustic and building acoustic FEM simulations  
*Franck, Andreas; Aretz, Marc*  
S.01 Monday 3rd - 16:00 - Room R-102
- COM-05-005.IP. Identification of boundary conditions in arbitrarily shaped cavities  
*Anderssohn, Robert; Marburg, Steffen*  
S.01 Monday 3rd - 16:20 - Room R-102
- COM-05-006. Numerical simulation of multichannel active control on cells with a frontal porous veil  
*Bermúdez, Alfredo; Gamallo, Pablo; Hervella-Nieto, Luis María; Prieto, Andrés*  
S.01 Monday 3rd - 16:40 - Room R-102
- COM-05-007.IP. Optimal space-time finite difference schemes for experimental booth design  
*Naka, Yusuke; Oberai, Assad A.; Shinn-Cunningham, Barbara G.*  
S.01 Monday 3rd - 17:00 - Room R-102



- COM-05-008-IP. Numerical analysis of interior sound fields using the fast multipole bem with a domain decomposition approach  
*Sakuma, Tetsuya; Yasuda, Yosuke*  
S.01 Monday 3rd - 17:20 - Room R-102
- COM-05-009. Boundary element analysis of circular dual-chamber mufflers with microperforated panel absorbers  
*Pasqual, Alexander M.; Arruda, José Roberto de F.*  
S.01 Monday 3rd - 17:40 - Room R-102
- COM-06 – COM-General
- COM-06-001. Acoustic-based surface roughness measurement of paper  
*Aguilar, Juan R., Salinas, Renato A., Briones, Leoncio J.*  
S.05 Wednesday 5th - 15:00 - Room R-102
- COM-06-002. CAE Modeling and Simulation for Acoustic Performance of Industrial Mufflers  
*Chinsuk Hong; Deahwan Kim; Weui Song Jeong*  
S.05 Wednesday 5th - 15:20 - Room R-102
- COM-06-003. Methodology for electro mechanical simulation of piezoelectric ceramics  
*Morcillo López, Miguel Ángel; Cesteros Morante, Beatriz; Cordero Izquierdo, Roberto; Hidalgo Otamendi, Antonio; Fernández, J. Francisco*  
S.05 Wednesday 5th - 15:40 - Room R-102
- COM-06-004. Modelling of Acoustic Wave Propagation using Transient Insular Nodal Analysis (TINA)  
*De Rybel, Tom; Martí, José; Hodgson, Murray*  
S.05 Wednesday 5th - 16:00 - Room R-102
- COM-06-005. Acoustical response of a room with computational techniques - improving direct diffuse rays as an extension of the specular images method  
*Feo Rodríguez, Walter A.*  
S.05 Wednesday 5th - 16:20 - Room R-102
- COM-06-006. An application of morphologic filters to remove non-linear distortions from time-frequency representations of acoustic signals  
*G. G. Soledad, N. O. Valery, M. R. Ramón*  
S.05 Wednesday 5th - 16:40 - Room R-102
- COM-06-007. A time domain model of a resonance tube containing a porous ceramic material  
*Kleiven, Stig; Kropp, Wolfgang; Larsson, Krister*  
S.05 Wednesday 5th - 17:00 - Room R-102
- COM-06-008. Acoustic modelling of the cooling system of an induction HOB  
*Lladó, Juan; Sánchez, Beatriz; Monterde, Fernando; Pina, Carmelo; Llorente, Sergio; Hernández, Pablo*  
S.05 Wednesday 5th - 17:20 - Room R-102
- COM-06-009. An Investigation of Parameters Controlling the Lowest Natural Frequency in Helmholtz Resonators  
*Nair, Unnikrishnan; Shete, C. D.; Padmanabhan, Chandramouli; Subramoniam, A.*  
S.05 Wednesday 5th - 17:40 - Room R-102
- COM-06-010. Traffic Noise Measurement: Frequency Response as a Function of Microphone Position from Computer Simulations  
*Miyara, Federico; Pasch, Vivian; Cabanellas, Susana; Yanitelli, Marta; Miechi, Pablo*  
S.06 Thursday 6th - 09:00 - Room R-102
- COM-06-011. On the well posed problem for a third-order hyperbolic equation  
*Magaña, Antonio; Quintanilla, Ramón*  
S.06 Thursday 6th - 09:20 - Room R-102
- COM-06-012. HRTF calculation in the full audible frequency range using FMBEM  
*Masumoto, Takayuki; Oshima, Takuya; Yasuda, Yosuke; Sakuma, Tetsuya; Kabuto, Masaaki; Akiyama, Makoto*  
S.06 Thursday 6th - 09:40 - Room R-102

COM-06-013. Perceptual evaluation of simulated head-related transfer functions  
*Julia Turku, Eira Seppälä, Ole Kirkeby, Asta Kärkkäinen, Leo Kärkkäinen*  
S.08 Friday 7th – 09.20 – Room R-101

COM-06-014. Numerical simulation of the acoustical waves propagation in a standing wave tube  
*Juliá Sanchis, Ernesto; Segura Alcaraz, Jorge; Alba Fernández, Jesús; del Rey Tormos, Romina*  
Poster - Tuesday 4th morning - Board 35

## **ELE – Electro-acoustics and Audio Engineering**

### **ELE-01 – Loudspeakers and sound reinforcement**

*Session Organizer: Andrzej Dobrucki*

ELE-01-001-IP. New Approach of Speaker Simulation for Sound Reinforcement  
*Ahnert, Wolfgang; Feistel, Stefan; Maier, Torsten*  
S.02 Tuesday 4th - 09:00 - Room R-101

ELE-01-002. Adaptation of Multichannel Sound Reproduction to Restricted Speaker Arrangement  
*Ando, Akio*  
S.02 Tuesday 4th - 09:20 - Room R-101

ELE-01-003-IP. Magnetohydrodynamic transducer  
*Dobrucki, Andrzej; Czura, Lukasz*  
S.02 Tuesday 4th - 09:40 - Room R-101

ELE-01-004. Personal Audio with Multiple Dark Zones  
*Jones, Matthew; Elliott, Stephen*  
S.02 Tuesday 4th - 10:00 - Room R-101

ELE-01-005. Evaluation of the spatial field of loudspeakers configuration in home theatre 5.1 systems  
*Soelami, FXN; Sarwono, J. and Bagawan, T.*  
S.02 Tuesday 4th - 10:20 - Room R-101

ELE-01-006. Comparison of higher-order Ambisonics and wave field synthesis with respect to spatial aliasing artifacts  
*Sascha Spors, Jens Ahrens*  
S.02 Tuesday 4th - 10:40 - Room R-101

ELE-01-007. Influence of loudspeaker displacement on the reproduction quality of wave field synthesis systems  
*Strauß, Michael J.; Munderloh, Marco*  
S.02 Tuesday 4th - 11:00 - Room R-101

ELE-01-008-IP. How to ameliorate the linearity of loudspeakers  
*Lemarquand, Guy; Lemarquand, Valérie*  
S.02 Tuesday 4th - 11:20 - Room R-101

ELE-01-009-IP. Sound Distorter Based on Nonlinear Model of Dynamic Loudspeaker  
*Zoltogorski, Bronislaw; Pruchnicki, Piotr*  
S.02 Tuesday 4th - 11:40 - Room R-101

ELE-01-010-IP. Vibroacoustical characteristics of loudspeakers with damaged diaphragm  
*Romuald Bolejko*  
S.03 Tuesday 4th - 15:00 - Room R-101

ELE-01-011. Digital measurement of dynamic distortion of loudspeakers  
*Imaoka, Keiichi; Ohga, Juro*  
S.03 Tuesday 4th - 15:20 - Room R-101

ELE-01-012. Direct radiator loudspeaker by continuous revolution of ultrasonic motor  
*Yuta Ohnuma, Yusuke Iwaki, Juro Ohga, Hirokazu Negishi, Toshio Sashida, Kazuaki Maeda*  
S.03 Tuesday 4th - 15:40 - Room R-101

- ELE-01-013. Distortion reduction for the parametric loudspeaker  
*Yang, Jun; Ji, Peifeng; Gan, Woon-Seng*  
S.03 Tuesday 4th - 16:00 - Room R-101
- ELE-01-014-IP. Image of acoustic energy field radiated in 3d space by electrodynamic loudspeaker  
*Stefan Weyna*  
S.03 Tuesday 4th - 16:20 - Room R-101
- ELE-01-015-IP. The loudspeaker system equipped with organ tubes  
*Didkovskiy Vitaly, Dobrucki Andrzej, Lunyova Svetlana*  
S.03 Tuesday 4th - 16:40 - Room R-101
- ELE-01-016. The acoustic antennas for atmospheric research  
*Krasnenko, Nikolay*  
S.03 Tuesday 4th - 17:00 - Room R-101
- ELE-01-017. Design of acoustic box for loudspeakers with the use of hybrid model analytical-FE  
*Martín Sánchez, Juan Sabas, Cordero Izquierdo, Roberto, Lobo González, Fernando*  
S.03 Tuesday 4th - 17:20 - Room R-101
- ELE-01-018. Analysis and implementation of crosstalk filters for 3D sound reproduction  
*Botía Fernandez, Miguel David; Navarro Ruiz, Juan Miguel*  
S.03 Tuesday 4th - 17:40 - Room R-101
- ELE-01-019. A Method for Analyzing Compact Acoustic Reproduction Systems through Acoustic Equivalent Circuit  
*Nagase Yoshiaki, Tsujikawa Souichi, Kajikawa Yoshinobu, Nomura Yasuo*  
Poster - Tuesday 4th morning - Board 36
- ELE-02 – Microphones**  
*Session Organizer: Gerhard Sessler*
- ELE-02-001-IP. Micromachined microphones with diffraction-based optical interferometric readout and electrostatic actuation  
*F. Levent Degertekin, Neal A. Hall, Baris Bicen, Caesar Garcia, Kamran Jeelani, Shakeel Qureshi, Murat Okandan*  
S.04 Wednesday 5th - 09:00 - Room R-101
- ELE-02-002-IP. Challenges of high SNR [signal-to-noise] silicon micromachined microphones  
*Füldner, Marc; Dehé, Alfons*  
S.04 Wednesday 5th - 09:20 - Room R-101
- ELE-02-003-IP. Design considerations of silicon microphone backplates  
*Jianmin Miao, Chee Wee Tan and Zhihong Wang*  
S.04 Wednesday 5th - 09:40 - Room R-101
- ELE-02-004-IP. Chip scale packaged digital silicon microphone, technology and applications  
*Rombach, Pirmin; Carsten, Faellesen; Klein, Udo*  
S.04 Wednesday 5th - 10:00 - Room R-101
- ELE-02-005-IP. A silicon directional microphone with second-order directivity  
*Miles, Ronald N.; Liu, Yang; Su, Quang; Cui, Weili*  
S.04 Wednesday 5th - 10:20 - Room R-101
- ELE-02-006-IP. A Silicon Microphone Array Prototype for Hearing Aids  
*Christian Weistenhöfer*  
S.04 Wednesday 5th - 10:40 - Room R-101
- ELE-02-007-IP. Realization of a spherical microphone array  
*Meyer, Jens; Elko, Gary W.*  
S.04 Wednesday 5th - 11:00 - Room R-101

- ELE-02-008-IP. Broadband Ultrasonic Transducer  
*Lerch, Reinhard; Streicher, Alexander; Sutor, Alexander*  
S.04 Wednesday 5th - 11:20 - Room R-101
- ELE-02-009-IP. Piezoelectret-microphones with high capacitance and sensitivity  
*Hillenbrand, Joachim; Pondrom, Perceval; Sessler, Gerhard M.*  
S.04 Wednesday 5th - 11:40 - Room R-101
- ELE-02-010. Research progress in piezoelectric mems microphones  
*Tian, Jing; Wang, Chenghao; Xu, Lian; Yang, Chuwei; Li, Junhong*  
S.05 Wednesday 5th - 15:00 - Room R-101
- ELE-02-011. Theoretical study of an electrostatic transducer with a non planar backing electrode  
*Le Van Suu, Thierry; Durand, Stéphane; Bruneau, Michel; Honzik, Petr; Lotton, Pierrick*  
S.05 Wednesday 5th - 15:20 - Room R-101
- ELE-02-012. The environmentally resistant limit of electret condenser microphones with polymer film diaphragm electret  
*Yoshinobu, Yasuno; Kenzo, Miura*  
S.05 Wednesday 5th - 15:40 - Room R-101
- ELE-02-013. An initial investigation on simultaneous measurement of the free-field and diffuse-field sensitivity of microphones  
*Barrera-Figueroa, Salvador; Rasmussen, Knud; Jacobsen, Finn*  
S.05 Wednesday 5th - 16:00 - Room R-101
- ELE-02-014. Noise effect reduction in microphone reciprocity calibration  
*Wu, Lixue*  
S.05 Wednesday 5th - 16:20 - Room R-101
- ELE-03 – Sensor array system**  
*Session Organizer: Jens Meyer*
- ELE-03-001-IP. Towards superdirective beamforming with loudspeaker arrays  
*Edwin Mabande; Walter Kellermann*  
S.05 Wednesday 5th - 16:40 - Room R-101
- ELE-03-002-IP. Microphone arrays for measurement and recording  
*De Vries, Diemer*  
S.05 Wednesday 5th - 17:00 - Room R-101
- ELE-03-003-IP. Spherical arrays for capturing 3d sound fields: Prototype measurements versus analytical models  
*Daniel, Jerome*  
S.05 Wednesday 5th - 17:20 - Room R-101
- ELE-03-004-IP. Sampling-efficient numerically-robust spherical microphone arrays  
*Boaz Rafaely*  
S.05 Wednesday 5th - 17:40 - Room R-101
- ELE-03-005-IP. A second-order circular microphone array with out-of-plane beampattern control  
*Elko, Gary W.; Meyer, Jens*  
S.06 Thursday 6th - 09:00 - Room R-101
- ELE-03-006-IP. Sensing the world with arrays of microphones and cameras  
*O'Donovan, Adam; Duraiswami, Ramani; Neumann, Jan*  
S.06 Thursday 6th - 09:20 - Room R-101
- ELE-03-007. Plane wave decomposition as a tool for interactive modification of measured sound fields and their adaptation to different reproduction systems  
*Melchior, Frank; de Vries, Diemer*  
S.06 Thursday 6th - 09:40 - Room R-101

- ELE-03-008. Near-Field Sound Source Separation Based on Amplitude Ratio of Nearby Microphones  
*Nishimura, Ryouichi; Kitamura, Tatsuya; Inoue, Naomi*  
S.06 Thursday 6th - 10:00 - Room R-101
- ELE-03-009. A sound-source tracking device to track multiple talkers from microphone array and lavalier microphone data  
*Jonas Braasch; Nicholas Tranby*  
S.06 Thursday 6th - 10:20 - Room R-101
- ELE-03-010. Two dimensional DOA estimation based on object related transfer function for the integration with security camera  
*Usagawa, Tsuyoshi; Naganishi, Masahiro; Takada, Toshimichi; Chisaki, Yoshifumi Ebata, Masano*  
S.06 Thursday 6th - 10:40 - Room R-101
- ELE-03-011. A study on directivities of line MUM used unidirectional microphone units and its application to hearing aids  
*Miura, Kenzo; Arai, Yasuhiko*  
S.06 Thursday 6th - 11:00 - Room R-101
- ELE-03-012. Synergic integration of noise reduction and DOA estimation with stochastic target sound source and deterministic noise models  
*Mizumachi; Mitsunori; Niyada; Katsuyuki*  
Poster - Tuesday 4th afternoon - Board 01
- ELE-04 – ELE-General**
- ELE-04-001. Choosing the most appropriate sensor for acoustic measurements  
*Yntema, D.R.; Druyvesteyn, W.F.; Wiegerink, R.J.*  
S.07 Thursday 6th - 15:00 - Room R-101
- ELE-04-002. A theoretical study of sound field reconstruction techniques  
*Fazi, Filippo; Nelson, Philip*  
S.07 Thursday 6th - 15:20 - Room R-101
- ELE-04-003. The development of the sound field sharing system based on the boundary surface control principle  
*Ise, Shiro; Toyoda, Masahiro; Enomoto, Seigo; Nakamura, Satoshi*  
S.07 Thursday 6th - 15:40 - Room R-101
- ELE-04-004. The pipeline length measurement way by using TSP method  
*Takeshi, Araya; Hideo, Shibayama; Yoshiaki, Makabe; Eiji, Okamura*  
S.07 Thursday 6th - 16:00 - Room R-101
- ELE-04-005. Comparison of measurements method for analysis electro-acoustic systems with non-linearities  
*Kadlec, Frantisek; Novák, Antonín*  
S.07 Thursday 6th - 16:20 - Room R-101
- ELE-04-006. Identification of Nonlinearity of Electro-acoustic Systems using a Direct Path MISO method  
*Novák, Antonín*  
S.07 Thursday 6th - 16:40 - Room R-101
- ELE-04-007. Input behaviour of small acoustic components: measurement procedure and its accuracy  
*Rodrigues, Dominique; Guianvarc'h, Cécile; Durocher, Jean-Noel; Bruneau Michel; Bruneau, Anne-Marie*  
S.07 Thursday 6th - 17:00 - Room R-101
- ELE-04-008. Narrow tubes acoustic impedance characterization using finite element based tools  
*Bravo, Agustín; Ruiz, Mariano; Recuero, Manuel, López, Juan Manuel; De Arcas, Guillermo*  
S.07 Thursday 6th - 17:20 - Room R-101
- ELE-04-009. Subjective and Objective Quality Evaluation for Audio Watermarking Based on Sinusoidal Amplitude Modulation  
*Nishimura, Akira*  
S.07 Thursday 6th - 17:40 - Room R-101

- ELE-04-010. Intensity monitoring of acoustic quadrasonic recordings reproduced through a 5.1 loudspeaker array  
*Bonsi, Davide; Cengarle, Giulio; Stanzial, Domenico*  
Poster - Tuesday 4th afternoon - Board 02
- ELE-04-011. Determination of Transduction Coefficient or Receiving Sensitivity of an Acoustic Transducer  
*Atashkhouei, Reza*  
Poster - Tuesday 4th afternoon - Board 03
- ELE-04-012. Acoustic echo cancellation in frequency domain using combinations of filters  
*Azpicueta-Ruiz, Luis Antonio; Figueiras-Vidal, Anibal; Arenas-Garcia, Jeronimo*  
Poster - Tuesday 4th afternoon - Board 04
- ELE-04-013. Design of digital stereo amplifier for mobile IT device  
*Park, Joon-Hoon; Choi, Young-Gyu; Kim, Jin-Min; Jang, Sin-Do*  
Poster - Tuesday 4th afternoon - Board 05
- ELE-04-014. Estimation of the connection structure of branching tubule by the interference method  
*Hideo Shibayama; Takeshi Araya; Yoshiaki Makabe; Eiji Okamura*  
Poster - Tuesday 4th afternoon - Board 06
- ELE-04-015. Influence of the profile of some vibrating structures on their sound radiating efficiency and directivity  
*Jesús Alba, Jorge Arenas, Jaime Ramis*  
S.07 - Thursday 6th - 18:00 - Room R-101

#### **ENV – Environmental Acoustics**

##### **ENV-01 – Alternative mapping of the urban sound environment**

*Session Organizers: Mats Nilsson; Dick Botteldooren*

- ENV-01-001-IP. Mapping soundscape evaluation in urban open spaces with artificial neural networks and ordinal logistic regression  
*Yu, Lei; Kang, Jian; Harrison, Robert*  
S.04 Wednesday 5th - 09:00 - Room L-201
- ENV-01-002-IP. Acoustic indicators of soundscape quality and noise annoyance in outdoor urban areas  
*Nilsson, Mats E.; Botteldooren, Dick; De Coensel, Bere*  
S.04 Wednesday 5th - 09:20 - Room L-201
- ENV-01-003-IP. Mapping noise effects in the context of overall well being  
*Botteldooren, Dick*  
S.04 Wednesday 5th - 09:40 - Room L-201
- ENV-01-004. An Expedient Method to Convert Noise Maps Regarding Different Time Period Base  
*Rodrigues, Rui Calejo; Torre, Alipio; Correia, Helena*  
S.04 Wednesday 5th - 10:00 - Room L-201
- ENV-01-005. Urban noise in Havana, some considerations for its mitigation  
*Díaz, Gisela; de la Peña, Ana M., Castillo, Maysel*  
S.04 Wednesday 5th - 10:20 - Room L-201
- ENV-01-006. Model of noise prediction adapted to urban variables. Implementation in the city of Leon  
*Fuentes, Marcos; García, Eduardo; Cepeda, Jesús; Búrdalo, Gabriel; de Barrios, Mercedes*  
S.04 Wednesday 5th - 10:40 - Room L-201
- ENV-01-007. Modelling the urban noise of the city of Belém (Brasil)  
*Moraes, Elcione; Simón, Francisco; Guimarães, Luis; Moreno, Antonio*  
S.04 Wednesday 5th - 11:00 - Room L-201
- ENV-01-008. Determination of the acoustic trace of vehicles  
*Martín Bravo, M<sup>a</sup> A.; Tarrero Fernández, A.I.; Arias Puga, J.E.; González Suárez, J.; Machimbarrena Gutiérrez, M.*  
Poster - Tuesday 4th afternoon - Board 07

- ENV-01-009. Evaluation of urban noise in the city of Cáceres (Spain) by two different methods.  
*Barrigón Morillas, Juan Miguel; Gómez Escobar, Valentín; Mateos Corchado, Laura; Molano Infante, Elena; Cancho Cardeñona, Adelaida; Trujillo Carmona, José; Méndez Sierra, Juan Antonio; Vélchez-Gómez, Rosendo; Carmona del Río, Javier; Vaquero, José M.*  
**Poster - Tuesday 4th afternoon - Board 08**
- ENV-01-010. Noise mapping of the city of Cáceres (Spain) using mathematical predictive method  
*Barrigón Morillas, Juan Miguel; Vilches-Gómez, Rosendo; Gómez Escobar, Valentín; Méndez Sierra, Juan Antonio; Molina Fernández, Javier; Carmona del Río, Javier; Vaquero, José M.*  
**Poster - Tuesday 4th morning - Board 37**
- ENV-02 – Community response to noise**  
*Session Organizers: Giovanni Brambilla; Brigitte Schulte-Forkamp*
- ENV-02-001-IP. Annoyance by combined exposure to noise from road traffic and rail traffic discussed in the framework of the noticing model  
*Botteldooren, Dick; Dekoninck, Luc; de Greve, Bram; De Coensel, Bert; Lercher, Peter*  
**S.02 Tuesday 4th - 09:00 - Room L-201**
- ENV-02-002-IP. Noise sensitivity: Associations with demographic factors and health  
*Stansfeld, Stephen; Clark, Charlotte*  
**S.02 Tuesday 4th - 09:20 - Room L-201**
- ENV-02-003-IP. The children's community response to environmental noise  
*Berglund, Birgitta<sup>1</sup>; Lindvall, Thomas; Nilsson, Mats E.*  
**S.02 Tuesday 4th - 09:40 - Room L-201**
- ENV-02-004-IP. Analysis of some results of psychosocial noise impact studies in Spain  
*Aspuru, Itziar; Herranz, M. Karmele*  
**S.02 Tuesday 4th - 10:00 - Room L-201**
- ENV-02-005-IP. Leisure noise and community noise assessment  
*Burgess, Marion*  
**S.02 Tuesday 4th - 10:20 - Room L-201**
- ENV-02-006-IP. Integrating the soundscape in the community noise area  
*Brigitte Schulte-Forkamp*  
**S.02 Tuesday 4th - 10:40 - Room L-201**
- ENV-02-007. Traffic noise effects on Padilla Avenue's neighbors. Environmental noise reduction proposal  
*Díaz, Monica; Rojas, Axa; Martínez, Ede*  
**S.02 Tuesday 4th - 11:00 - Room L-201**
- ENV-02-008. Subjective assessment of road traffic noise by inhabitants of border-adjacent areas  
*Kompańa, Janusz; Lipowczan, Adam*  
**S.02 Tuesday 4th - 11:20 - Room L-201**
- ENV-02-009. Application of pilot survey in population exposed to noise levels produced by air operations of the international airport Arturo Merino Benítez of Santiago – Chile  
*Marzzano, Antonio; Recuero, Manuel*  
**S.02 Tuesday 4th - 11:40 - Room L-201**
- ENV-02-010. Evaluation of the road traffic noise and anomalous sound events annoyance on the population  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
**Poster - Tuesday 4th afternoon - Board 09**
- ENV-03 – Environmental noise policy**  
*Session Organizer: Birgitta Berglund*
- ENV-03-001-IP. Urban noise indicators: noise events and background noise  
*Jacques Beaumont*  
**S.01 Monday 3rd - 15:00 - Room L-202**

- ENV-03-002. Urban and building acoustics management in the next decades: A matter of prevention, simplification and education  
*Baring, João Gualberto de Azevedo*  
S.01 Monday 3rd - 15:20 - Room L-202
- ENV-03-003. Evaluation of acoustic noise from music activities. is dB(A) correct?  
*Barti, Robert*  
S.01 Monday 3rd - 15:40 - Room L-202
- ENV-03-004. A national project to evaluate and reduce high sound levels from music  
*Bengtsson Ryberg, Johanna; Norberg, Kristina*  
S.01 Monday 3rd - 16:00 - Room L-202
- ENV-03-005. Noise mortgage - another way of noise abatement  
*Boegli, Hans; Menk, Julia; Hauser, Andreas; Abbuehl, Frank*  
S.01 Monday 3rd - 16:20 - Room L-202
- ENV-03-006. Construction noise policy in New York City  
*Rosen, Stephen; Sachwald, Benjamin*  
Poster - Tuesday 4th afternoon - Board 10
- ENV-03-007. Screen use possibilities as protection from transport noise and prospects of their improvement  
*Danielius Guzas; Robertas Klimas; Vaclovas Tricys*  
Poster - Tuesday 4th afternoon - Board 11
- ENV-03-008. Comparison of measured noise pollution levels in a large German city with calculated levels according to guidelines  
*Poland, Kathleen; Nickel, Willi; Aflalo, Eric*  
Poster - Tuesday 4th afternoon - Board 12
- ENV-04 – Long-term evaluation of the impact of environmental noise**  
*Session Organizers: Julie Hatfield; Irene van Kamp*
- ENV-04-001-IP. Associations between road traffic noise, aircraft noise and noise annoyance. preliminary results of the hyena study  
*Babisch, Wolfgang; Houthuijs, Danny; Pershagen, Goran; Cadum, Ennio; Velonakis, Manolis; Katsouyanni, Klea; Jarup, Lars*  
S.06 Thursday 6th - 09:00 - Romm L-202
- ENV-04-002-IP. Longitudinal effects of a sudden change in aircraft noise exposure on annoyance and sleep disturbance around Amsterdam airport.  
*Breugelmans, Oscar; Houthuijs, Danny; van Kamp, Irene; Stellato, Rebecca; van Wiechen, Carla; Doornbos, Gerda*  
S.06 Thursday 6th - 09:20 - Romm L-202
- ENV-04-003-IP. The effects of changes in noise exposure on perceived control over noise and its relationship with mood and reaction; a longitudinal survey  
*Hatfield, J.; Job, R.F.S.; Hede, A.J.; Peploe, P.; Carter, N.L.; Taylor, R.; Morrell, S.*  
S.06 Thursday 6th - 09:40 - Romm L-202
- ENV-04-004-IP. Annoyance and noise sensitivity in urban areas  
*Griefahn, Barbara; Marks, Anke; Gjestland, Truls; Preis, Anna*  
S.06 Thursday 6th - 10:00 - Romm L-202
- ENV-04-005-IP. The role of attitudes and sensitivity in reactions to changing noise  
*Job, R.F.S.; Hatfield, J.; Hede, A.J.; Peploe, P.; Carter, N.L.; Taylor, R.; Morrell, S.*  
S.06 Thursday 6th - 10:20 - Romm L-202
- ENV-04-006-IP. Environmental Noise and Mental Health  
*Irene van Kamp, Danny Houthuijs, Carla van Wiechen, Rebecca.Stellato, Oscar Breugelmans*  
S.06 Thursday 6th - 10:40 - Romm L-202



## ENV-05 – Low frequency noise

*Session Organizer: Martijn Vercammen*

- ENV-05-001-IP. Criteria for low frequency noise  
*Vercammen, Martijn*  
S.03 Tuesday 4th - 15:00 - Room L-201
- ENV-05-002-IP. An investigation of twenty-one cases of low-frequency noise complaints  
*Pedersen, Christian Sejer; Møller, Henrik; Waye, Kerstin Persson*  
S.03 Tuesday 4th - 15:20 - Room L-201
- ENV-05-003-IP. Indoor measurements of low-frequency noise for annoyance assessment  
*Pedersen, Steffen; Møller, Henrik; Persson Waye, Kerstin*  
S.03 Tuesday 4th - 15:40 - Room L-201
- ENV-05-004-IP. The Missing 16 Hz - Can We Live With It?  
*Broner, Norm*  
S.03 Tuesday 4th - 16:00 - Room L-201
- ENV-05-005. Sensitivity of the existing entertainment noise survey methods to varying musical events  
*Stojiljkovic, Milan; Vlaovic, Igor*  
S.03 Tuesday 4th - 16:20 - Room L-201

## ENV-06 – Noise barriers

*Session Organizers: Jean Pierre Clairbois; Christo Padmos; Damaso Alegre*

- ENV -06-001-IP. Prediction of noise barrier performance from intrinsic acoustical characteristics  
*Padmos, Cristo J.; De Roo, Foort*  
S.08 Friday 7th - 10:20 - Room L-201
- ENV-06-002-IP. How to predict the far field effect of barrier tops from diffraction test results  
*De Roo, Foort; Padmos, Cristo J.*  
S.08 Friday 7th - 10:40 - Room L-201
- ENV-06-003-IP. Effects of the double diffraction edge on traffic noise levels in the far field  
*Hans van Leeuwen; Renez Nota*  
S.08 Friday 7th - 11:00 - Room L-201
- ENV-06-004-IP. Using cen/ts 1793-4 to develop an acoustically effective added device for road traffic noise barriers  
*Garai, Massimo; Guidorzi, Paolo*  
S.08 Friday 7th - 11:20 - Room L-201
- ENV-06-005. Influence of the type of ground on the effectiveness of an acoustic barrier  
*Tarrero Fernández, A.I.; Martín Bravo, M<sup>a</sup> A.; González Suárez, J.; Machimbarrena Gutiérrez, M.; García Sastre, L.*  
S.08 Friday 7th - 11:40 - Room L-201
- ENV-06-006. Lifting preliminary of attenuation of noise by means of vegetable encountered on the biomass of the fenced-in tract of land forest gross & forest amazônica  
*Almeida, J.S.; Arruda, I.L.*  
Poster - Tuesday 4th afternoon - Board 13

## ENV-07 – Noise mapping and action planning

*Session Organizer: Wolfgang Probst*

- ENV-07-001-IP. Noise mapping by computer modelling: A practical implementation  
*Hernández Soto, Pablo; Puig i Solé, Eduard*  
S.06 Thursday 6th - 09:00 - Room L-201
- ENV-07-002-IP. Geodesic systems for noise mapping and action planning – The new approach  
*Notario, Antonio*  
S.06 Thursday 6th - 09:20 - Room L-201

- ENV-07-003. Large scale noise mapping in alpine valleys with MITHRA-SIG  
*Baulac, Marine; Defrance, Jérôme; Olny, Xavier; Miège, Bernard; Yvon, Claude*  
S.06 Thursday 6th - 09:40 - Room L-201
- ENV-07-004. Preparation of noise action plans for major roads, railways and airports according to European Directive 2002/49/EC  
*Cholava, Rudolf; Markova, Petra; Smekal, Petr*  
S.06 Thursday 6th - 10:00 - Room L-201
- ENV-07-005. Outdoor Sound Propagation in Mountainous Areas: Comparison of Reference and Engineering Models  
*De Greve, Bram; Van Renterghem, Timothy; Botteldooren, Dick*  
S.06 Thursday 6th - 10:20 - Room L-201
- ENV-07-006. A comparison of two models for outdoor sound propagation: Harmonoise and Nord2000  
*Jónsson, Gunnar Birnir; Jacobsen, Finn*  
S.06 Thursday 6th - 10:40 - Room L-201
- ENV-07-007. The development of an independent noise prediction model  
*King, Eoin; Rice, Henry*  
S.06 Thursday 6th - 11:00 - Room L-201
- ENV-07-008. Exploring environmental noise in a virtual 3D world  
*Pilla, Francesco; Rice, Henry*  
S.06 Thursday 6th - 11:20 - Room L-201
- ENV-07-009. Calculate noise of wind-farms  
*Sénat, Claude; Garrigues, Sébastien; Gamba, René*  
S.06 Thursday 6th - 11:40 - Room L-201
- ENV-07-010. Comparison among different solutions for the reduction of traffic noise issues  
*Morcillo, Miguel A.; Bragado, Beatriz; Hidalgo, Antonio; Hernández, María J.; García, Carlos*  
Poster - Tuesday 4th afternoon - Board 14
- ENV-07-011. Noise map of traffic flow in oldtown Lima, Peru  
*Llimpe, Celso; Piaggio, Miguel; Moreno, Jorge*  
Poster - Tuesday 4th afternoon - Board 15
- ENV-07-012. Geothermal power plants noise mapping  
*Strani, Giancarlo*  
Poster - Tuesday 4th afternoon - Board 16
- ENV-08 – Prediction of sound propagation in urban environment**  
*Session Organizer: Jian Kang*
- ENV-08-001-IP. A markovian technique for predicting noise propagation in a street containing obstructions  
*Oldham, David; Haron, Zaiton*  
S.07 Thursday 6th - 15:00 - Room L-201
- ENV-08-002-IP. Sound field modeling in urban areas using the transport theory  
*Picaut, Judicaël; Colle, Stéphane; Bérengier, Michel*  
S.07 Thursday 6th - 15:20 - Room L-201
- ENV-08-003-IP. Combined ray-tracing and radiosity simulation for urban open spaces  
*Meng, Yan; Kang, Jian*  
S.07 Thursday 6th - 15:40 - Room L-201
- ENV-08-004-IP. Improving the shielding of road traffic noise incourtyards: Treatments with vertical and horizontal screens  
*Hornikx, Maarten; Forssén, Jens*  
S.07 Thursday 6th - 16:00 - Room L-201

- ENV-08-005-IP. Effects of urban morphological characteristics on the noise distribution:  
A comparison between the UK and China  
*Wang, Bo, Kang, Jian, Zhou, Jie*  
S.07 Thursday 6th - 16:20 - Room L-201
- ENV-08-006-IP. How to evaluate the accuracy of a noise map  
*Probst, Wolfgang; Huber, Bernd*  
S.07 Thursday 6th - 16:40 - Room L-201
- ENV-08-007. Italian railways noise description: Comparison between measurements and simulations  
*Ausejo, Miguel; Recuero, Manuel; Fausti, Patrizio; Quiqueto, Giuliano*  
S.07 Thursday 6th - 17:00 - Room L-201
- ENV-08-008. A method for prediction of the stabilization time in traffic noise measurements  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
S.07 Thursday 6th - 17:20 - Room L-201
- ENV-08-009. A methodology to estimate the effect of pavement management on noise emission  
in urban areas  
*Béregier, Michel; Bendtsen, Hans; Haider, Manfred*  
S.07 Thursday 6th - 17:40 - Room L-201
- ENV-08-010. Obtaining of a factor to describe the anomalous sound events in traffic noise measurements  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
S.08 Friday 7th - 09:00 - Room L-201
- ENV-08-011. Noise pollution level corrected in terms of the incident total sonorous energy  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
S.08 Friday 7th - 09:20 - Room L-201
- ENV-08-012. IMAGINE project: urban measurements of Lden and Lnight and calculation of the associated  
uncertainties  
*Paviotti, Marco; Kephelopoulos, Stylianos; Jonasson, Hans*  
S.08 Friday 7th - 09:40 - Room L-201
- ENV-08-013. Comparison of computer software for external noise prediction  
*Martínez, Ede; Recuero, Manuel*  
S.08 Friday 7th - 10:00 - Room L-201
- ENV-08-014. Characterization of the different types of vehicles flow in traffic  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
Poster - Tuesday 4th afternoon - Board 17
- ENV-08-015. Influence of the type of route in the acoustic emission of different types  
of vehicles in traffic  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
Poster - Tuesday 4th afternoon - Board 18
- ENV-09 – Sound quality outdoors**  
*Session Organizers: Daniele Dubois; Catherine Guastavino*
- ENV-09-001-IP. Perception of product sound quality and sound quality in soundscapes  
*Brigitte Schulte-Fortkamp; Klaus Genuit; André Fiebig*  
S.05 Wednesday 5th - 15:00 - Room L-201
- ENV-09-002. Criteria for the determination of the area to be mapped around roads  
[Directive 2002/49/EC]  
*Zambon, Giovanni; Radaelli, Simone; Bisceglie, Alessandro*  
S.05 Wednesday 5th - 15:20 - Room L-201
- ENV-09-003-IP. NOIDESc: Incorporating Feature Descriptors into a Novel Railway Noise Evaluation Scheme  
*Brian Gygi, Werner A. Deutsch, Anton Noll, Alexander Hirner, Timo Becker*  
S.05 Wednesday 5th - 15:40 - Room L-201

- ENV-09-004-IP. Perceptual attributes of low amplitude sonic booms and other transient environmental sounds heard outdoors  
*Marshall, Andrew; Davies, Patricia*  
S.05 Wednesday 5th - 16:00 - Room L-201
- ENV-09-005-IP. Predicting listeners' reports of environmental sounds  
*Andringa, Tjeerd; van Grootel, Maarten*  
S.05 Wednesday 5th - 16:20 - Room L-201
- ENV-09-006. Environmental noise annoyance in Valencia (Spain). Classification of the noise according to physical approaches and psychoacoustics  
*José Romero Fau., Salvador Cerdá Jordá, Alicia Jiménez, Jose Luis Miralles, José Vicente Garrigues, Rosa Cibrián, Jaime Segura*  
S.05 Wednesday 5th - 16:40 - Room L-201
- ENV-09-007-IP. Sounds like a park: a computational technique to recognize soundscapes holistically, without source identification  
*Aucouturier, Jean-Julien; Defreville, Boris*  
S.05 Wednesday 5th - 17:00 - Room L-201
- ENV-09-008-IP. Cognitive evaluation of sound quality: Bridging the gap between acoustic measurements and meaning  
*Daniele Dubois, Guastavino, Catherine*  
S.05 Wednesday 5th - 17:20 - Room L-201
- ENV-09-009-IP. The influence of traffic flow pattern on communiti noise annoyance  
*Gjesland Truls*  
S.05 Wednesday 5th - 17:40 - Room L-201
- ENV-10 – Soundscape and cultural perception**  
*Session Organizers: Giovanni Brambilla; Luigi Maffei*
- ENV-10-001-IP. Acoustic Cartographies: Supporting Experiential Learning and Shared Understanding of the Natural Heritage through Collaborative Mapping  
*Giaccardi, Elisa; Fogli, Daniela; Gelsomini, Ilaria; Pedrazzi, Francesca; Sabena, Gianluca; Speed, Chris*  
S.01 Monday 3rd - 15:00 - Room L-201
- ENV-10-002-IP. Soundscape in the archeological area of Pompei  
*Brambilla, Giovanni; De Gregorio, Leda; Maffei, Luigi; Masullo, Massimiliano*  
S.01 Monday 3rd - 15:20 - Room L-201
- ENV-10-003-IP. Acoustic and visual factors affecting the construction of tranquil space  
*Pheasant, Robert; Horoshenkov, Kirill; Watts, Greg; Barrett, Brendan*  
S.01 Monday 3rd - 15:40 - Room L-201
- ENV-10-004. The positive soundscape project  
*Davies, W. J.; Adams, M. D.; Bruce, N. S.; Cain, R.; Carlyle, A.; Cusack, P; Hume, K. I.; Jennings, P; Plack, C. J.*  
S.01 Monday 3rd - 16:00 - Room L-201
- ENV-10-005. Perception of a French city soundscapes by hearing impaired people  
*Saby, Laurent; Guarracino, Gérard; Premat, Eric*  
S.01 Monday 3rd - 16:20 - Room L-201
- ENV-10-006. Sound environment qualitative assessment in the streets of Maracaibo – Venezuela  
*Quintero, Carolina; Recuero, Manuel*  
S.01 Monday 3rd - 16:40 - Room L-201
- ENV-10-007. Annoyance from industrial noise: Laboratory study regarding noises from transformers fitted with a huge air cooling system  
*Alayrac, Marion; Marquis-Favre, Catherine; Viollon, Stéphanie*  
S.01 Monday 3rd - 17:00 - Room L-201

- ENV-10-008. Influence of Low Frequency Sound Resembling Offshore Wind Turbine Noise on Fish  
*Mueller-Blenkle, Christina; Reid, Dave; Jones, Emma G.; Lüdemann, Karin; Kafemann, Rudolf; Elepfandt, Andreas*  
S.01 Monday 3rd - 17:20 - Room L-201
- ENV-10-009. Importance of personal, attitudinal and contextual variables in the assessment of pleasantness of the urban sound environment  
*Guillén, José Domingo; López Barrio, Isabel*  
Poster - Tuesday 4th afternoon - Board 19
- ENV-10-010. The soundscape experience  
*Guillén, José Domingo; López Barrio, Isabel*  
Poster - Tuesday 4th afternoon - Board 20
- ENV-11 – Transportation noise**  
*Session Organizers: Jordi Romeu; Santiago Jiménez; Joan Cardona*
- ENV-11-001-IP. Characteristics of vibration and low frequency noise radiated from the highway bridge and countermeasure  
*Saiji, Fukada; Yasuo, Kajikawa; Masanobu, Sugimoto; Hirokazu, Hama; Tetsuo, Matsuda*  
S.04 Wednesday 5th - 09:00 - Romm L-202
- ENV-11-002-IP. Induced vibrations due to high-speed trains: Córdoba-Málaga high speed line  
*Galvín, Pedro; Domínguez, José*  
S.04 Wednesday 5th - 09:20 - Romm L-202
- ENV-11-003-IP. Vehicle passby noise prediction and audio synthesis  
*Molla, S.; Bongini, E.; Gautier, P.E.; Habault, D.; Mattéi, P.O.; Poisson, F.*  
S.04 Wednesday 5th - 09:40 - Romm L-202
- ENV-11-004. Modelling non-linear contact stiffness  
*Andersson, Patrik B.U.*  
S.04 Wednesday 5th - 10:00 - Romm L-202
- ENV-11-005. Noise levels near roads of major cities of the united arab emirates  
*Hussein M Elmehdi, Nawal Nayfeh*  
S.04 Wednesday 5th - 10:20 - Romm L-202
- ENV-11-006. Noise levels study produced by the air operations of the international airport Arturo Merino Benítez of Santiago - Chile  
*Marzzano, Antonio; Recuero, Manuel*  
S.04 Wednesday 5th - 10:40 - Romm L-202
- ENV-11-007. The effect of damping the wheels and varying wheel/rail friction coefficient on railway noise  
*Vinolas, Jordi; Nieto, F. Javier; Lopez, Ines; Egaña, Javier I.*  
S.04 Wednesday 5th - 11:00 - Romm L-202
- ENV-11-008. Investigation of noise impact of aircraft engine run-up test at a domestic airport  
*Yoshioka, Hisashi; Yamada, Ichiro*  
S.04 Wednesday 5th - 11:20 - Romm L-202
- ENV-11-009. Road transport noise: assessment and simulation, action plans and enhancement techniques  
*Hidalgo Otamendi, Antonio; Hernández Martín, Alberto, Morcillo Sánchez, Miguel Angel*  
S.04 Wednesday 5th - 11:40 - Romm L-202
- ENV-11-010. Influence of the traffic lights in the noise level generated by the road traffic  
*Torija, Antonio J.; Ruiz, Diego P., Ramos, A.*  
Poster - Tuesday 4th afternoon - Board 21

## MUS – Musical Acoustics

### MUS-01 – Acoustics of stringed instruments

*Session Organizers: Jose Antunes; Octávio Inácio*

- MUS-01-001. Out-of-plane violin bridge in-situ motion  
*Fan, Christina; Bissinger, George*  
S.04 Wednesday 5th - 09:00 - Room R-401
- MUS-01-002-IP. 3-Dimensional violin corpus motion and far-field radiativity  
*Bissinger, George*  
S.04 Wednesday 5th - 09:20 - Room R-401
- MUS-01-003-IP. Iar and modal analysis in stringed traditional musical instruments  
*Tronchin, Lamberto*  
S.04 Wednesday 5th - 09:40 - Room R-401
- MUS-01-004-IP. The role of vibrato in violin tone quality and historic performance  
*Gough, Colin*  
S.04 Wednesday 5th - 10:00 - Room R-401
- MUS-01-005-IP. Resonance box of the guitar: Structure-fluid interaction  
*Elejabarrieta, María Jesús; Ezcurra, Amaia; Santamaría, Carlos*  
S.04 Wednesday 5th - 10:20 - Room R-401
- MUS-01-006-IP. A substructure method for the computation of complex string/body coupled modes from the unconstrained subsystems  
*Antunes, José; Inácio, Octávio*  
S.04 Wednesday 5th - 10:40 - Room R-401
- MUS-01-007. Numerical simulation of vibrating string subject to sawari mechanism  
*Taguti, Tomoyasu*  
S.04 Wednesday 5th - 11:00 - Room R-401
- MUS-01-008-IP. Modelling and numerical simulation of strings based on lie groups and algebras. Applications to the nonlinear dynamics of Reissner Beams  
*Joël Bensoam; David Roze*  
S.04 Wednesday 5th - 11:20 - Room R-401
- MUS-01-009. Admittance Measurement of a Grand Piano Soundboard  
*Grigorios Plitsis*  
S.04 Wednesday 5th - 11:40 - Room R-401
- MUS-01-010. Piano string vibration and the role of the bridge  
*Stulov, Anatoli; Erofeyev, Vladimir; Lissenkova, Elena*  
S.05 Wednesday 5th - 15:00 - Room R-401
- MUS-01-011. Three-dimensional interaction between strings, bridge and soundboard in modern piano s treble range  
*Cuenca, Jacques; Caussé, René*  
S.05 Wednesday 5th - 15:20 - Room R-401
- MUS-01-012. Piano Soundboard Under Prestress: A Numerical Approach  
*Mamou-Mani, Adrien; Frelat, Joël; Besnainou, Charles*  
S.05 Wednesday 5th - 15:40 - Room R-401
- MUS-01-013. Experimental and theoretical study of the vibration of strings in the high register of the piano. The effect of the “Duplex Scale”  
*Zelmar, Philippe ; Caussé, René*  
S.05 Wednesday 5th - 16:00 - Room R-401
- MUS-01-014-IP. Analysis of the Sustain-Pedal Effect in the Grand Piano  
*Lehtonen, Heidi-Maria; Penttinen, Henri; Rauhala, Jukka; Välimäki, Vesa*  
S.05 Wednesday 5th - 16:20 - Room R-401

## MUS-02 – Ancient instruments and traditional musical instruments

*Session Organizers: Murray Campbell; Vincent Gibiat*

- MUS-02-001-IP. Acoustic measurements along the history of saxophone: from Adolphe Sax to vintage instruments  
*Vincent Gibiat, Hamid Louaked, Jérôme Selmer*  
S.01 Monday 3rd - 15:00 - Room R-401
- MUS-02-002. Non-linear propagation characteristics in the evolution of brass musical instrument design  
*Myers, Arnold; Gilbert, Joël; Pyle, Robert W.; Campbell, D. Murray*  
S.01 Monday 3rd - 15:20 - Room R-401
- MUS-02-003-IP. Measurement Techniques and the Playability of Terminal Horn Crooks  
*Jonathan Kemp, John Chick, Murray Campbell, Darren Hendrie, Arnold Myers*  
S.01 Monday 3rd - 15:40 - Room R-401
- MUS-02-004-IP. What have we learnt from Dom Bédos about pipe organ actions?  
*Woolley, Alan*  
S.01 Monday 3rd - 16:00 Room R-401
- MUS-02-005. Acoustical analysis for a txistu  
*Agos Esparza, Asier; Macho Stadler, Erica; Elejalde García, María Jesus*  
S.01 Monday 3rd - 16:20 - Room R-401
- MUS-02-006-IP. Acoustica studies of historical keyboard instruments in the Royal College of Music Museum of Instruments  
*Earis, Andrew; Daly, Melissa ;JL Sun, Fei ;Thompson, Richard C.*  
S.01 Monday 3rd - 16:40 - Room R-401
- MUS-02-007-IP. Acoustics of Korean historical percussion instruments pyeongyeong and pyeonjong  
*Yoo Junehee, Suyoung Jin, Hyunsoo Kim, Koeng-mo Sung, Junguk Noh, Hyun-woo Ko, Thomas Rossing*  
S.01 Monday 3rd - 17:00 - Room R-401
- MUS-02-008. Introduction to the acoustic study of the Peruvian quena  
*Llimpe, Celso; Moreno, Jorge; Piaggio, Miguel*  
S.01 Monday 3rd - 17:20 - Room R-401
- MUS-02-009. Acoustic Transfer function of the Anjok: A bridge of the Korean traditional string instruments  
*Hyun-Woo Koh; Jung Uk Noh; Sangha Park; Koeng-mo Sung*  
S.01 Monday 3rd - 17:40 - Room R-401
- MUS-02-010. Acoustic Radiation Pattern of the Sanjo Gayageum: A Korean traditional plucked string instrument  
*Jung Uk Noh; Hyun-Woo Koh; Koeng-mo Sung*  
Poster - Tuesday 4th afternoon - Board 22
- MUS-02-011. Acoustic characteristics of the Haegeum body  
*Sangha Park; Jung Uk Noh; Ah-reum Lee; Koeng-Mo Sung*  
Poster - Tuesday 4th afternoon - Board 23

## MUS-03 – Choir acoustics

*Session Organizers: Sten Ternström; Malte Kob*

- MUS-03-001-IP. Larynx closed quotient variation in quartet singing  
*Howard, David M.*  
S.02 Tuesday 4th - 09:00 - Rom R-401
- MUS-03-002-IP. Formant frequency adjustment in barbershop quartet singing  
*Ternström, Sten; Kalin, Gustaf*  
S.02 Tuesday 4th - 09:20 - Rom R-401
- MUS-03-003-IP. Directivity measurements of adjacent singers in a choir  
*Jers, Harald*  
S.02 Tuesday 4th - 09:40 - Rom R-401

- MUS-03-004-IP. Musicians' adjustment of performance to room acoustics - Part I: Experimental performance and interview in simulated sound field  
*Ueno, Kanako; Kato, Kosuke; Kawai, Keiji*  
S.02 Tuesday 4th - 10:00 - Rom R-401
- MUS-03-005-IP. Musicians adjustment of performance to room acoustics, Part II: Acoustical analysis of performed sound signals  
*Kato, Kosuke; Ueno, Kanako; Kawai, Keiji*  
S.02 Tuesday 4th - 10:20 - Rom R-401
- MUS-03-006-IP. Voice assessment in choir singers using a virtual choir environment  
*Libeaux, Angela; Lentz, Tobias; Houben, Diana; Kob, Malte*  
S.02 Tuesday 4th - 10:40 - Rom R-401
- MUS-04 – Linear and nonlinear modes in musical acoustics**  
*Session Organizers: Christophe Vergez, Jean Kergomard*
- MUS-04-001-IP. Theoretical and experimental investigations of harp s sympathetic modes  
*Le Carrou, Jean-Loïc; Gautier, François, Badeau, Roland*  
S.05 Wednesday 5th - 16:40 - Room R-401
- MUS-04-002-IP. A linearized modal analysis of the bowed string  
*Inácio, Octávio; Antunes, José*  
S.05 Wednesday 5th - 17:00 - Room R-401
- MUS-04-003-IP. Effects of a static transverse load on nonlinear dynamical properties of a buckled beam: A reduced order 2 degrees of freedom model  
*Mamou-Mani, Adrien; Frelat, Joël; Besnainou, Charles*  
S.05 Wednesday 5th - 17:20 - Room R-401
- MUS-04-004-IP. Non linear modal approach for electrodynamic loudspeaker modeling  
*Quaegebeur, Nicolas; Chaigne, Antoine*  
S.05 Wednesday 5th - 17:40 - Room R-401
- MUS-04-005-IP. Non-linear vibrations of shallow spherical caps with imperfections: Resonant forcing and mode coupling  
*Olivier Thomas; Cédric Camier; Cyril Touzé*  
S.06 Thursday 6th - 09:00 - Room R-401
- MUS-04-006-IP. Modal representations and computational complexity in physical modeling sound synthesis applications  
*Bilbao, Stefan*  
S.06 Thursday 6th - 09:20 - Room R-401
- MUS-04-007. Simulation of single reed instruments oscillations based on modal decomposition of bore and reed dynamics  
*Silva, F.; Debut, V.; Kergomard, J. ; Vergez, C.; Deblevid, A.; Guillemain, P.*  
S.06 Thursday 6th - 09:40 - Room R-401
- MUS-04-008-IP. Analysis and synthesis of bowed plates  
*Serafin, Stefania*  
S.06 Thursday 6th - 10:00 - Room R-401
- MUS-04-009. Sound synthesis of a non-linear string using volterra series  
*Roze, David; Hélie, Thomas*  
S.06 Thursday 6th - 10:20 - Room R-401
- MUS-04-010. On the properness condition for the complex modes in vibroacoustic modal analysis  
*Emmanuel Foltete, Morvan Ouiss*  
S.05 Wenesday 5th - 18:00 - Room R-401



**MUS-05 – Physical models and virtual musical instruments**

*Session Organizer: Vesa Valimäki*

- MUS-05-001-IP. Timbre control of a real-time percussive synthesizer  
*Aramaki, Mitsuko; Kronland-Martinet, Richard; Voinier, Thierry; Ystad, Solvi*  
S.06 Thursday 6th - 10:40 - Room R-401
- MUS-05-002-IP. Some comments on computational issues in modularized physical modeling  
sound synthesis  
*Bilbao, Stefan*  
S.06 Thursday 6th - 11:00 - Room R-401
- MUS-05-003-IP. A brief survey of the lattice Boltzmann method in musical acoustics  
*Da Silva, Andrey R.; Kuehnelt, Helmut; Scavone, Gary*  
S.06 Thursday 6th - 11:20 - Room R-401
- MUS-05-004-IP. Physical modeling studies of the piano and violin  
*Giordano, N.; McKinney, C. P.*  
S.06 Thursday 6th - 11:40 - Room R-401
- MUS-05-005-IP. The Dynamically Varying Digital Waveguide Mesh  
*Murphy, Damian; Shelley, Simon; Ternström, Sten; Howard, David*  
S.07 Thursday 6th - 15:00 - Room R-401
- MUS-05-006-IP. Combining Performance Actions with Spectral Models for Violin Sound  
Transformation  
*Pérez, Alfonso; Bonada, Jordi; Maestre, Esteban; Guaus, Enric; Blaauw, Merlijn*  
S.07 Thursday 6th - 15:20 - Room R-401
- MUS-05-007-IP. Recent advances in real-time bowed string synthesis: Evaluation of the models  
*Serafin, Stefania; Young, Diana*  
S.07 Thursday 6th - 15:40 - Room R-401
- MUS-05-008-IP. Modeling and Measurement of Wind Instrument Bores  
*Smyth, Tamara; Abel, Jonathan*  
S.07 Thursday 6th - 16:00 - Room R-401
- MUS-05-009-IP. Towards physics-based re-synthesis of woodwind tones  
*Van Walstijn, Maarten; De Sanctis, Giovanni*  
S.07 Thursday 6th - 16:20 - Room R-401
- MUS-05-010. Physical Modelling and Measurements of Plate Reverberation  
*Kevin Arcas*  
S.07 Thursday 6th - 16:40 - Room R-401
- MUS-05-011. Cymatic: a real-time tactile-controlled physical modelling musical instrument  
*Howard, David M.; Murphy, Damian T.*  
S.07 Thursday 6th - 17:00 - Room R-401
- MUS-05-012. Aspects on physical modelling of a Chinese string instrument - the Guqin  
*Penttinen, Henri; Pakarinen, Jyri; Välimäki, Vesa; Laurson, Mikael; Kuuskankare, Mika; Li, Henbing;  
Leman, Marc*  
S.07 Thursday 6th - 17:20 - Room R-401
- MUS-05-013-IP. Modeling virtual percussions and their virtual actuators  
**Rovetta, Diego; Sarti, Augusto; Scarparo, Gabriele; Tubaro, Stefano**  
S.07 Thursday 6th - 17:40 - Room R-401
- MUS-05-014. The estimation of the vibroacoustic parameters of the sounding boards  
of musical instruments  
*Shlychkov, Sergey*  
Poster - Tuesday 4th afternoon - Board 24

## MUS-06 – Production and perception of singing voices

*Session Organizers: Malte Kob; Nathalie Henrich*

- MUS-06-001-IP. The activity of breathing muscles and thorax movement in classical singing  
*Viggo Pettersen*  
S.02 Tuesday 4th - 11:00 - Room R-401
- MUS-06-002-IP. Vocal Registers and Laryngeal Mechanisms, a case study: The French "Voix Mixte"  
*Castellengo, Michèle, Lamesch, Sylvain, Henrich, Nathalie*  
S.02 Tuesday 4th - 11:20 - Room R-401
- MUS-06-003-IP. Resonance tuning in singing  
*Smith, John; Henrich, Nathalie; Wolfe, Joe*  
S.02 Tuesday 4th - 11:40 - Room R-401
- MUS-06-004-IP. Directivity measurements of the singing voice  
*Katz, Brian F.G.; d'Alessandro, Christophe*  
S.03 Tuesday 4th - 15:00 - Room R-401
- MUS-06-005-IP. Vocal directivity of eight opera singers in terms of spectro-spatial parameters  
*Cabrera, Densil; Davis, Pamela J.; Connolly, Anna*  
S.03 Tuesday 4th - 15:20 - Room R-401
- MUS-06-006-IP. Spectral correlates of carrying power in speech and western lyrical singing according to acoustic and phonetic factors  
*Pillot, Claire; Vaissière, Jacqueline*  
S.03 Tuesday 4th - 15:40 - Room R-401
- MUS-06-007. What are the spectral differences for singing sounds produced by different laryngeal mechanisms in the same pitch range?  
*Lamesch, Sylvain; Doval, Boris*  
S.03 Tuesday 4th - 16:00 - Room R-401
- MUS-06-008. An acoustic study on singing voices taught with different singing techniques  
*Sobucki, Antoni*  
S.03 Tuesday 4th - 16:20 - Room R-401
- MUS-06-009-IP. Observation of subharmonic voices  
*Sakakibara, Ken-Ichi; Imagawa, Hiroshi; Kimura, Miwako; Tokuda, Isao; Tayama, Niro*  
S.03 Tuesday 4th - 16:40 - Room R-401
- MUS-06-010. Exploration of vocal-folds and ventricular-bands interaction in singing using high-speed cinematography and electroglottography  
*Bailly, Lucie; Henrich, Nathalie; Webb, Mal; Müller, Frank; Licht, Anna-Katharina; Hess, Markus*  
S.03 Tuesday 4th - 17:00 - Room R-401
- MUS-06-011-IP. Application and extensions of straight-based morphing for singing voice manipulations based on vowel centred approach  
*Kawahara, Hideki*  
S.03 Tuesday 4th - 17:20 - Room R-401
- MUS-06-012-IP. Physical modelling of the human voice - influence of high frequency and acoustical coupling  
*Brutel-Vuilmet, Claire; Pelorson, Xavier; Van Hirtum, Annemie; Rutu, Nicolas*  
S.03 Tuesday 4th - 17:40 - Room R-401

## MUS-07 – MUS-General

- MUS-07-001. Vocal Tract Interactions in Recorder Performance  
*Chen, Jer-Ming; Laurin, Dan; Smith, John; Wolfe, Joe*  
S.08 Friday 7th - 09:00 - Room R-401

- MUS-07-002. Reed vibration in western free-reed instruments  
*Cottingham, James P.*  
S.08 Friday 7th - 09:20 - Room R-401
- MUS-07-003. Physical basis of musical consonance and its application to the construction of scales  
*Fernández-Herrero, Olaya; Lorente, Miguel*  
S.08 Friday 7th - 09:40 - Room R-401
- MUS-07-004. Timbral adjectives for the control of a music synthesizer  
*Howard, David M., Disley, Alastair C, Hunt, Andrew D.*  
S.08 Friday 7th - 10:00 - Room R-401
- MUS-07-005. An algorithm to evaluate the appropriateness for playing scales on the piano  
*Seiko Akinaga, Masanobu Miura, Norio Emura and Yanagida Masuzo*  
S.08 Friday 7th - 10:20 - Room R-401
- MUS-07-006. FEM simulation of wall vibrations of brass instruments  
*Smevik, Torunn*  
S.08 Friday 7th - 10:40 - Room R-401
- MUS-07-007. Noise reduction combining microphone and piezoelectric device  
*Takahashi, Naoya; Matsumoto, Mitsuharu; Hashimoto, Shuji*  
S.08 Friday 7th - 11:00 - Room R-401
- MUS-07-008. The acoustics of the player-didjeridu system  
*Wolfe, Joe; Fletcher, Neville; Hollenberg, Lloyd; Lange, Ben; Smith John; Tarnopolsky, Alex*  
S.08 Friday 7th - 11:20 - Room R-401
- MUS-07-009. Note extraction of music signals using wavelet transforms  
*Charu Pathak*  
S.08 Friday 7th - 11:40 - Room R-401
- MUS-07-010. A new approach for the characterization of the resonance wood  
*M. Caniato, S. Favretto, E. Lucchini*  
Poster - Tuesday 4th afternoon - Board 25
- MUS-07-011. Models of timbre using spectro-temporal receptive fields: investigation of coding strategies  
*Elhilali, Mounya; Shamma, Shihab; Thorpe, Simon J.; Pressnitzer, Daniel*  
Poster - Tuesday 4th afternoon - Board 26
- MUS-07-012. Evaluation of the Emotional Affect Evoked by Music  
*Satoshi, Oode; Johann Ichiro, Bomer; Atsushi, Imai; Akio Ando; Takashi Taniguchi*  
Poster - Tuesday 4th afternoon - Board 27
- MUS-07-013. An HMM based investigation of differences between musical instruments of the same type  
*Eichner, Matthias; Wolff, Matthias; Hoffmann, Rüdiger*  
Poster - Tuesday 4th afternoon - Board 28
- MUS-07-014. A support system for practicing the drums using visual feedback  
*Naoki Iwami; Masanobu Miura*  
Poster - Tuesday 4th afternoon - Board 29
- MUS-07-015. Estimating a chord name for a set of notes played with a midi-guitar  
*Yasushi Konoki, Norio Emura; Masanobu Miura*  
Poster - Tuesday 4th afternoon - Board 30
- MUS-07-016. Automatic score reduction for small-sized wind-orchestras from a score for standard wind-orchestras  
*Maekawa, Hirosh; Emura, Norio; Miura, Masanobu; Yanagida, Masuzo*  
Poster - Tuesday 4th afternoon - Board 31
- MUS-07-017. A System Yielding Harmony to Given Melodies based on the Theory of Popular Music  
*Hikaru Morita; Norio Emura; Masanobu Miura; Masuzo Yanagida*  
Poster - Tuesday 4th afternoon - Board 32

- MUS-07-018. Generation of Suitable Phrases for Basic Training to overcome weak points in playing the piano  
*Masahiro Mukai; Norio Emura; Masanobu Miura; Masuzo Yanagida*  
Poster - Tuesday 4th afternoon - Board 33
- MUS-07-019. An index for evaluating the performance proficiency of tremolo played by the Mandolin  
*Nozomiko Yasui, Masafumi Kinou and Masanobu Miura*  
Poster - Tuesday 4th afternoon - Board 34
- MUS-07-020. Music therapy with a large-scale midi controller using a mat switch  
*Niikawa, Takuya; Yamagishi, Kazuaki; Onishi, Eri; Kawachi, Ryosuke; Minato, Kotaro; Yoshihara, Tatsuo; Terayama, Naoya*  
Poster - Tuesday 4th afternoon - Board 35
- MUS-07-021. A modular system yielding Jazz-style voicing for a given set of a melody and its chord name sequence  
*Norio Emura; Masanobu Miura; Masuzo Yanagida*  
Poster - Tuesday 4th afternoon - Board 36
- MUS-07-022. Comparison between different resonance woods by a new scientific method  
*M. Caniato, S. Favretto, E. Lucchini*  
Poster - Wednesday 5th morning - Board 01

### **NLA – Non-linear Acoustics**

#### **NLA-01 – Cavitation and bubbly media**

*Session Organizers: Robert Mettin; Cleofé Campos*

- NLA-01-001-IP. Cavitation nuclei and thresholds of acoustic cavitation in ocean water  
*Akulichev, Victor*  
S.02 Tuesday 4th - 09:00 - Room R-201
- NLA-01-002-IP. Optimization of the cavitation activity in pulsed ultrasound fields  
*Dezhkunov, Nikolai; Francescutto, Alberto; Calligaris, Franco; Ciuti, Piero, Fedorynchic, Michael*  
S.02 Tuesday 4th - 09:20 - Room R-201
- NLA-01-003-IP. Liquid-bubble dynamics on ultrasonic applications  
*Fuster, Daniel; Hauke, Guillermo; Dopazo, César*  
S.02 Tuesday 4th - 09:40 - Room R-201
- NLA-01-004-IP. Dynamics of an acoustically driven encapsulated gas bubble immersed in a liquid  
*Jiménez-Fernández, Javier*  
S.02 Tuesday 4th - 10:00 - Room R-201
- NLA-01-005-IP. Numerical simulation of nonlinear ultrasonic waves in bubbly liquid with nonhomogeneous bubble distribution  
*Vanhille, Christian; Campos-Pozuelo, Cleofé*  
S.02 Tuesday 4th - 10:20 - Room R-201
- NLA-01-006-IP. Experimental observation of nonlinear self-focusing in the cavitation field  
*Campos-Pozuelo, Cleofé; Granger, Christian; Vanhille, Christian; Dubus, Bertrand*  
S.02 Tuesday 4th - 10:40 - Room R-201
- NLA-01-007. Dispersive and nonlinear effects during wave propagation in biot medium with fluid saturated cavities  
*Erofeyev, Vladimir; Pegushin, Anton; Sheshenin, Sergey*  
S.02 Tuesday 4th - 11:00 - Room R-201
- NLA-01-008-IP. Sound propagation and bubble motion in a cavitating channel  
*Mettin, Robert, Claussen, Jann-Ohle; Campos-Pozuelo, Cleofé*  
S.02 Tuesday 4th - 11:20 - Room R-201
- NLA-01-009. Nonlinear interaction of elastic waves in solid porous material  
*Pegushin, Anton; Erofeyev, Vladimir; Sheshenin, Sergey*  
S.02 Tuesday 4th - 11:40 - Room R-201

- NLA-01-010. The effect of HIFU-relevant rates of heating on the growth and dissolution of nuclei available for inertial cavitation  
*Webb, Ian R.; Arora, Manish; Collin, Jamie R.T.; Payne, Stephen J.; Roy, Ronald A. and Coussios, Constantin-C.*  
**S.03 Tuesday 4th - 15:00 - Room-R-201**
- NLA-01-011-IP. Acoustic shock waves as a cell-permeabilization method  
*Loske, Achim; Martínez de la Escalera, Gonzalo; Armenta, Eduardo; Varela, Alfredo*  
**S.03 Tuesday 4th - 15:20 - Room-R-201**
- NLA-01-012. Remotely powered microfluidics  
*Dijkink, Rory; Ohl, Claus-Dieter; Prosperetti, Andrea*  
**S.03 Tuesday 4th - 15:40 - Room-R-201**
- NLA-01-013-IP. Influence of ambient bubble radius on sonoluminescence and sonochemical reactions  
*Yasui, Kyuichi; Tuziuti, Toru; Kozuka, Teruyuki; Towata, Atsuya; Iida, Yasuo*  
**S.03 Tuesday 4th - 16:00 - Room-R-201**
- NLA-01-014-IP. Reconstruction of sonoluminescent OH bands. From Hydrodynamics to Spectroscopy  
*Thierry Lepoint, Bertrand Dubus*  
**S.03 Tuesday 4th - 16:20 - Room-R-201**
- NLA-01-015-IP. Sound, shells and sonoporation  
*Michiel Postema*  
**S.03 Tuesday 4th - 16:40 - Room-R-201**
- NLA-01-016-IP. Soundwaves microbubble interactions: the effects of biomaterials in vicinity and different wave profiles  
*Fong, Siew Wan; Klaseboer, Evert; Khoo, Boo Cheong*  
**S.03 Tuesday 4th - 17:00 - Room-R-201**
- NLA-01-017. Pressure pulses from transient cavitation in High-Q resonators  
*Gaitan, D. Felipe; Tessien, Ross A., Hiller, Robert A*  
**S.03 Tuesday 4th - 17:20 - Room-R-201**
- NLA-01-018. Sonoluminescence in hetero organic volatile solvents at room temperature  
*Troia, Adriano; Madonna-Ripa, Daniele; Spagnolo, Renato*  
**S.03 Tuesday 4th - 17:40 - Room-R-201**
- NLA-02 – Generation, measurement and modelling of high power sound waves in liquid or air**  
*Session Organizers: Vera Khokhlova; Philippe Blanc-Benon*
- NLA-02-001-IP. High power ultrasound sources employed in lithotripsy and HIFU medical fields  
*Cathignol, Dominique*  
**S.06 Thursday 6th - 09:00 - Room R-201**
- NLA-02-002-IP. High pressure pulses generated by piezoelectric half- and full-spheres applied to liquids  
*Riedlinger, Rainer E.; Emter, Thomas; Liebler, Marko*  
**S.06 Thursday 6th - 09:20 - Room R-201**
- NLA-02-003-IP. High power focused ultrasound fields in therapeutic medical applications: Modeling and measurements with a fiber optic hydrophone  
*Michael R. Bailey, Michael S. Canney, Vera A. Khokhlova, Oleg A. Sapozhnikov, and Lawrence A. Crum*  
**S.06 Thursday 6th - 09:40 - Room R-201**
- NLA-02-004-IP. Experimental study of a spark discharge as an acoustic source  
*Ayrault, Christophe; Bequin, Philippe; Legros, Mathieu*  
**S.06 Thursday 6th - 10:00 - Room R-201**
- NLA-02-005-IP. Measurements of acoustic pulses in shock wave lithotripsy in the presence of cavitation  
*Pishchalnikov, Yuri; Kreider, Wayne; McAteer, James; Williams, James; Pishchalnikova, Irina; Bailey, Michael*  
**S.06 Thursday 6th - 10:20 - Room R-201**

- NLA-02-006-IP. Microorganism inactivation by acoustic cavitation produced with underwater shock waves  
*Loske, Achim; Álvarez, Ulises; Ramírez, Araceli; Fernández, Francisco; Méndez, Arturo*  
S.06 Thursday 6th - 10:40 - Room R-201
- NLA-02-007. Spark-generated N-waves for laboratory-scale propagation experiments in air: Measurements and modeling  
*Ollivier, Sébastien, Averiyarov Mikhail A., Yuldashev Petr V., Khokhlova Vera A., Blanc-Benon Philippe*  
S.06 Thursday 6th - 11:00 - Room R-201
- NLA-02-008. Improvement of a directional loudspeaker by coupling of a piezoelectric film and acoustic cavities  
*Alexandre Ritty, Bruno Gazengel, Pierrick Lotton and Pascal Hamery*  
S.06 Thursday 6th - 11:20 - Room R-201
- NLA-02-009-IP. Acoustic pressures in miniature resonators  
*X. Y. Huang, N. T. Nguyen and C. Luo*  
S.06 Thursday 6th - 11:40 - Room R-201
- NLA-02-010. A study on effects of the valves of acoustic compressors on their delivery flow rate  
*Masuda, Mitsuhiro; Kawashima, Shintaro*  
Poster - Wednesday 5th morning - Board 02
- NLA-02-011. An experimental study of the scattering sound by sound reflected from a concave surface  
*Sayin, Umut; Ivana Rosell Turull*  
Poster - Wednesday 5th morning - Board 03
- NLA-03 – Nonlinear Acoustics in Medical ultrasound**  
*Session Organizer: Michael Bailey*
- NLA-03-001-IP. Influence of a Bifrequency Excitation on the Ultrasonic Cavitation Threshold  
*Gilles, Bruno; Saletes, Izella ; Béra, Jean-Christophe*  
S.01 Monday 3rd- 16:20 - Room R-201
- NLA-03-002-IP. Efficient heating and localized millisecond boiling in tissue phantoms by high intensity focused ultrasound due to formation of shocks  
*Khokhlova, Vera; Canney, Michael; Bailey, Michael; Crum, Lawrence*  
S.01 Monday 3rd- 16:40 - Room R-201
- NLA-03-003-IP. Nonlinear shear wave beams in soft tissue-like media  
*Wochner, Mark S.; Hamilton, Mark F.; Ilinski, Yuri A.; Zabolotskaya, Evgenia A.*  
S.01 Monday 3rd- 17:00 - Room R-201
- NLA-03-004. Frequency analysis of shock wave scattering to identify kidney stone fragmentation in shock wave lithotripsy  
*Owen, Neil; Bailey, Michael; Sapozhnikov, Oleg; Crum, Lawrence*  
S.01 Monday 3rd- 17:20 - Room R-201
- NLA-03-005. Nonlinear and diffraction effects in high intensity focused ultrasound beams of various geometry  
*Bessonova Olga; Khokhlova Vera*  
Poster - Wednesday 5th morning - Board 04
- NLA-04 – Nonlinear dynamic and chaos**  
*Session Organizers: Werner Lauterborn; Ulrich Parlitz; Victor Espinosa*
- NLA-04-001-IP. Chaos and musical instruments  
*Vincent Gibiat*  
S.07 Thursday 6th - 15:00 - Room R-201
- NLA-04-002-IP. Synchronization of organ pipes  
*M. Abel, S. Bergweiler*  
S.07 Thursday 6th - 15:20 - Room R-201

- NLA-04-003-IP. Non linear dynamics and voice  
*Hans-Peter Herzel*  
**S.07 Thursday 6th - 15:40 - Room R-201**
- NLA-04-004-IP. Cavity solitons and pattern formation in acoustic resonators containing a viscous medium  
*Isabel Pérez-Arjona, V.J. Sánchez Morcillo, Germán J. de Valcárcel, Joan Martínez-Mora, Javier Redondo*  
**S.07 Thursday 6th - 16:00 - Room R-201**
- NLA-04-005. Modeling of low frequency electrodynamic loudspeaker as nonlinear driven anharmonic oscillator  
*Petusic, Antonio; Djurek, Ivan; Djurek, Danijel*  
**S.07 Thursday 6th - 16:20 - Room R-201**
- NLA-04-006-IP. Hidden complexity of coupled nonlinear oscillators  
*Ulrich Parlitz*  
**S.07 Thursday 6th - 16:40 - Room R-201**
- NLA-04-007. Complex dynamics in a magnetoacoustic resonator  
*V.J. Sánchez-Morcillo, J. Martínez-Mora, J. Redondo*  
**Poster - Wednesday 5th morning - Board 05**
- NLA-05 – Nonlinear interactions of vibration modes in solid structures**  
*Session Organizer: Adriano Alippi*
- NLA-05-001-IP. Non Linear Down-Frequency Conversion Effects in High Intensity Vibration of plate transducers and piezoelectric structures  
*A. Alippi, A. Bettucci, E. Riera, J. A. Gallego Juarez*  
**S.07 Thursday 6th - 17:00 - Room R-201**
- NLA-05-002-IP. Nonlinear influences of a localized defect in a solid resonator  
*Fillinger, Laurent; Zaitsev, Vladimir; Gusev, Vitalyi*  
**S.07 Thursday 6th - 17:20 - Room R-201**
- NLA-05-003-IP. Nonlinear vibration spectra of planar defects in solids  
*Solodov, Igor*  
**S.07 Thursday 6th - 17:40 - Room R-201**
- NLA-06 – Nonlinear methods in the evaluation of material microdamage**  
*Session Organizer: Koen van den Abeele*
- NLA-06-001-IP. Elastic wave nonlinearity for monitoring of localized damage in engineering materials  
*Solodov, Igor; Busse, Gerhard*  
**S.08 Friday 7th - 09:00 - Room R-201**
- NLA-06-002-IP. Nonlinearity based diagnosis and localization techniques for microdamage detection  
*Koen Van Den Abeele, Pierre-Yves Le Bas*  
**S.08 Friday 7th - 09:20 - Room R-201**
- NLA-06-003-IP. Advances in time reversal nonlinear elastic wave spectroscopy [TR NEWS] for application to nonlinear nondestructive evaluation, Imaging and source complexity  
*Paul Johnson, T.J. Ulrich, Brian Anderson*  
**S.08 Friday 7th - 09:40 - Room R-201**
- NLA-06-004-IP. Ultrasonic inter-modulation for global non-destructive testing  
*Courtney, C.R.P.; Drinkwater, B. W.; Neild, S.A.; Wilcox, P.D.*  
**S.08 Friday 7th - 10:00 - Room R-201**
- NLA-06-005-IP. Monitoring fatigue damage in cortical bone using nonlinear elastic wave spectroscopy  
*TJ Ulrich, Paul A. Johnson, Marie Muller, Pascal Laugier, Maryline Talmant, David Mitton*  
**S.08 Friday 7th - 10:20 - Room R-201**

- NLA-06-006-IP. Higher harmonic imaging of micro damage and tight cracks  
*Koichiro, Kawashima; Morimasa, Murase; Fumio, Fujita*  
S.08 Friday 7th - 10:40 - Room R-201
- NLA-06-007-IP. Is stick-slip an important cause of acoustic dissipation in damaged synthetic opal?  
*Fillinger, Laurent; Gusev, Vitalji*  
S.08 Friday 7th - 11:00 - Room R-201
- NLA-06-008. TR-New and NEWS-TR experiments for an imaging of the local nonlinearity in damaged aeronautic complex structure  
*Serge Dos Santos, Pierre-Yves Le Bas, Koen Van Den Abeele, Thomas Goursolle, Olivier Bou Matar*  
S.08 Friday 7th - 11:20 - Room R-201
- NLA-06-009-IP. Experimental study of the influence of corrosion on the nonlinear elastic properties of metals  
*Ignacio Tínao Perez-Miravete, R. Rodríguez-Montejano, C. Campos-Pozuelo*  
S.08 Friday 7th - 11:40 - Room R-201
- NLA-06-010. Structural damage of aluminum alloy 6082 determined by nonlinear elastic wave modulation spectroscopy  
*Straka, Ladislav; Yagodzinsky, Yuriy; Hänninen, Hannu*  
Poster - Wednesday 5th morning - Board 06
- NLA-07 – Numerical methods in non-linear acoustics**  
*Session Organizers: Christian Vanhille; Cleofé Campos*
- NLA-07-001-IP. Numerical simulation of acoustical shock wave propagation in heterogeneous and moving media  
*Coulouvrat, François; Marchiano, Régis; Ganjehi, Lili; Rollet, Christian*  
S.05 Wednesday 5th - 15:20 - Room R-201
- NLA-07-002-IP. Numerical simulation of two-dimensional high-amplitude acoustic field in cylindrical resonators using Kuznetsov's equation  
*Cervenka, Milan*  
S.05 Wednesday 5th - 15:40 - Room R-201
- NLA-07-003-IP. Acoustic streaming in a resonance field of cylindrical standing waves  
*Yano, Takeru*  
S.05 Wednesday 5th - 16:00 - Room R-201
- NLA-07-004-IP. Investigation of amplitude dependence on nonlinear acoustics using the direct simulation Monte Carlo method  
*Hanford, Amanda D.; Long, Lyle N.*  
S.05 Wednesday 5th - 16:20 - Room R-201
- NLA-07-005-IP. 2D and 3D pseudo spectral time domain simulations of elastic waves propagation in nonlinear hysteretic heterogeneous solids: Application to Time Reversal Imaging of Damaged Materials  
*Bou Matar, Olivier; Goursolle, Thomas; Dos Santos, Serge; Calle, Samuel*  
S.05 Wednesday 5th - 16:40 - Room R-201
- NLA-07-006-IP. Numerical study of particle motion in a standing wave including nonlinear interactions  
*Icár González*  
S.05 Wednesday 5th - 17:00 - Room R-201
- NLA-07-007-IP. Radiation Force from Scattering Calculations: Beams and other Examples  
*Marston, Philip L. and Thiessen, David B.*  
S.05 Wednesday 5th - 17:20 - Room R-201
- NLA-07-008. 3D time-domain modeling of nonlinear medical ultrasound with a contrast source method: behavior of the contrast sources  
*Huijssen, Jacob; Verweij, Martin D.; De Jong, Nico*  
S.05 Wednesday 5th - 17:40 - Room R-201



## NLA-08 – Sonic boom

*Session Organizers: François Coulouvrat; Philippe Blanc-Benon; Victor Sparrow*

- NLA-08-001-IP. From sonic boom to sonic puff  
*Plotkin, Kenneth J.*  
S.04 Wednesday 5th - 09:00 - Room R-201
- NLA-08-002-IP. Sonic-boom research and low-boom demonstrator project in JAXA  
*Makino, Yoshikazu; Naka, Yusuke*  
S.04 Wednesday 5th - 09:20 - Room R-201
- NLA-08-003-IP. HISAC midterm: Overview of sonic boom issues  
*Heron, Nicolas; Rogé, Gilbert; Johan, Zdenek; Coulouvrat, François, Dagrau, Franck*  
S.04 Wednesday 5th - 09:40 - Room R-201
- NLA-08-004-IP. Experimental simulation of the sonic boom at the laboratory scale  
*Thomas, JeanLouis; Coulouvrat, François; Marchiano, Régis; Baudoin, Michaël; Ganjehi, Lili*  
S.04 Wednesday 5th - 10:00 - Room R-201
- NLA-08-005-IP. Acoustic propagation and atmosphere characteristics derived from infrasonic waves generated by the secondary sonic bang  
*Gainville, Olaf; Blanc, Elisabeth; Le Pichon, Alexis; Piserchia, Pierre-Franck; Blanc-Benon, Philippe*  
S.04 Wednesday 5th - 10:20 - Room R-201
- NLA-08-006-IP. A semantic differential study of low amplitude supersonic aircraft noise and other transient sounds  
*Marshall, Andrew; Davies, Patricia*  
S.04 Wednesday 5th - 10:40 - Room R-201
- NLA-08-007. A complete process for sonic boom assessment with atmospheric and manoeuvres effects  
*Dagrau, Franck; Coulouvrat, François; Heron, Nicolas; Marchiano, Régis; Rogé, Gilbert; Johan, Zdenek*  
S.04 Wednesday 5th - 11:00 - Room R-201
- NLA-08-008. Numerical simulation of “low level” sonic boom propagation through random inhomogeneous sound speed fields  
*Ollivier, Sébastien; Blanc-Benon, Philippe*  
S.04 Wednesday 5th - 11:20 - Room R-201
- NLA-08-009. Nonlinear propagation of shock waves through heterogeneous media  
*Ganjehi, Lili; Marchiano, Régis; Coulouvrat, François; Thomas, Jean-Louis*  
S.04 Wednesday 5th - 11:40 - Room R-201
- NLA-08-010. Perceived loudness fluctuations in low-boom signatures due to atmospheric turbulence  
*Locey, Lance L.; Sparrow, Victor W.*  
S.05 Wednesday 5th - 15:00 - Room R-201

## NLA-09 – Subharmonic generation in acoustic resonators

*Session Organizers: Mack Breazeale; Victor Sanchez-Morcillo*

- NLA-09-001-IP. On the development of acoustical parametric oscillators  
*Breazeale, M. A.; Ostrovsky, L.*  
S.01 Monday 3rd- 15:00 - Room R-201
- NLA-09-002-IP. Nonlinear dynamics of parametric sound generation  
*V.J. Sánchez Morcillo, V. Espinosa, I. Pérez-Arjona, J. Redondo*  
S.01 Monday 3rd- 15:20 - Room R-201
- NLA-09-003-IP. Stability Zones and Acoustic Parametric Oscillation  
*McPherson, Michael S.; Breazeale, M. A.; Teklu, Alem*  
S.01 Monday 3rd- 15:40 - Room R-201

NLA-09-004-IP. A parametric ultrasonic method for the evaluation of adhesive layer  
*S.I. Rokhlin and L. Adler*  
S.01 Monday 3rd- 16:00 - Room R-201

#### NLA-10 – NLA-General

- NLA-10-001. Optical measurement and numerical simulations of the self-modulated low frequency displacement  
*Rénier, Mathieu; Barrière, Christophe, Marchiano, Régis, Coulouvrat, François, Royer Daniel*  
S.04 Wednesday 5th - 09:00 - Room R-103
- NLA-10-002. Study of the nonlinear flow due to a change of section in an acoustic waveguide using piv and pod  
*Marx, David; Bailliet, Hélène ; Valière, Jean-Christophe*  
S.04 Wednesday 5th - 09:20 - Room R-103
- NLA-10-003. LDV measurement of fast acoustic streaming in a standing wave guide  
*Moreau, Solenn; Bailliet, Hélène; Valière, Jean-Christophe*  
S.04 Wednesday 5th - 09:40 - Room R-103
- NLA-10-004. On momentum of sound pulses  
*Voronovich, Alexander*  
S.04 Wednesday 5th - 10:00 - Room R-103
- NLA-10-005. Nonlinear acoustic imaging of isoechogenic objects and flows using ultrasound wave phase conjugation  
*Philippe Pernod, Vladimir Preobrazhensky, Yuri Pylönov, Leonid Krutyansky*  
S.08 Friday 7th - 09:40 - Room R-101
- NLA-10-006-IP. Acoustic virtual laboratory: A modeling tool for wave processes and high intensity focused ultrasound (HIFU) applications  
*Francesco P. Curra, Steven G. Kargl*  
S.08 Friday 7th - 10:00 - Room R-101
- NLA-10-007. Study of the nonlinear flow due to a change of section in an acoustic waveguide using PIV and POD  
*David Marx, Helene Bailliet, Jean-Christophe Valière*  
S.08 Friday 7th - 10:20 - Room R-101
- NLA-10-008. Thermo-acoustic nonlinear studies in aqueous DNA solution  
*O.PChimankar, V.A Tabhane*  
S.08 Friday 7th - 10:40 - Room R-101
- NLA-10-009. Description of plane progressive nonlinear waves  
*Bednarik, Michal*  
Poster - Wenesday 5th morning - Board 07
- NLA-10-010. Properties of the nonlinear standing waves generated by a vibrating boundary  
*Konicek, Petr*  
Poster - Wenesday 5th morning - Board 08
- NLA-10-011. Diffraction of nonlinear N-wave behind a random phase screen  
*Yuldashev, Petr; Khokhlova, Vera; Averiyarov, Mikhail; Blanc-Benon, Philippe*  
Poster - Wenesday 5th morning - Board 09

#### NOI- Noise: sources and control

##### NOI-01 – Aircraft noise

*Session Organizers: Jordi Romeu; Yasuaki Okada*

- NOI-01-001-IP. Effect of atmospheric absorption on aircraft noise propagation in several world regions during a year  
*Okada, Yasuaki; Yoshihisa, Koichi; Iwase, Teruo*  
S.04 Wednesday 5th - 11:00 - Room L-203

- NOI-01-002-IP. Recent progress in development of airport noise models in Japan  
*Yamada, Ichiro*  
S.04 Wednesday 5th - 11:20 - Room L-203
- NOI-01-003-IP. Architectural measures aimed at solving the problem of aircraft noise in buildings  
*Zamora-Mestre, Joan-Lluís*  
S.04 Wednesday 5th - 11:40 - Room L-203
- NOI-01-004-IP. The use of sound intensity for the determination of the acoustic trajectory of aircrafts  
*Moschioni, Giovanni; Saggin, Bortolino; Tarabini, Marco.*  
S.05 Wednesday 5th - 15:00 - Room L-203
- NOI-01-005. Short term annoyance due to aircraft noise  
*Barbot, Benoit; Lavandier, Catherine*  
S.05 Wednesday 5th - 15:20 - Room L-203
- NOI-01-006. Effect of noise generated by VF-5 airplanes on the function of the heart  
*F. Méndez y M. Recuero*  
S.05 Wednesday 5th - 15:40 - Room L-203
- NOI-01-007. Interior active noise control in turbofan aircraft: Numerical simulation and experimental validation for optimal actuators positioning  
*Monaco, Ernesto; Franco, Francesco; Iadevaia, Michele; Lecce, Leonardo*  
S.05 Wednesday 5th - 16:00 - Room L-203
- NOI-01-008. Aeroacoustic research at the University of Adelaide: Development of an experimental facility, initial results, and future research programme  
*Damien Leclercq, Con Doolan, Capucine Roux*  
S.05 Wednesday 5th - 16:20 - Room L-203
- NOI-01-009. Reconstruction of Acoustic Source Strengths for Broadband Noise Control in a Lined Duct  
*Bravo, Teresa; Maury, Cedric*  
S.05 Wednesday 5th - 16:40 - Room L-203
- NOI-01-010. Analytical and experimental studies of the Herschel-Quincke tubes by its acoustic scattering matrix  
*Pairier, Benjamin; Foucart, Felix; Maury, Cédric; Ville, Jean-Michel*  
S.05 Wednesday 5th - 17:00 - Room L-203
- NOI-02 – Automotive acoustics**
- NOI-02-001-IP. In-situ measurements of the complex acoustic impedance of materials in vehicle interiors  
*Leonardo Miranda, Jorge D. Alvarez B., Finn Jacobsen*  
S.03 Tuesday 4th - 17:00 - Room L-203
- NOI-02-002. Active noise control inside the ambulance, doing a comparative study  
*Rosely M. V. Campos, Rodrigo Caputo, Aline U. Santos*  
S.03 Tuesday 4th - 17:20 - Room L-203
- NOI-02-003. Noise from road traffic and its effects on the central nervous system of informal and formal commercial traders in the centre of Barquisimeto  
*Díaz, Luz Mariana; Recuero, Manuel*  
S.03 Tuesday 4th - 17:40 - Room L-203
- NOI-02-004. Experimental investigation of acoustic properties of mufflers with perforated pipes  
*Gua, Ying; Dolinar, Andreas; Åbom, Mats; Allam, Sabry*  
S.04 Wednesday 5th - 09:00 - Room L-203
- NOI-02-005. Theoretical prediction of ground vibrations from heavy military vehicles  
*Krylov, V.V., McNuff, J. and Pickup, S.*  
S.04 Wednesday 5th - 09:20 - Room L-203

- NOI-02-006. Experimental investigation of sound power radiation from partly open enclosure with numerous interior objects  
*Lindberg, Eskil; Andersson, Patrik B.U.*  
S.04 Wednesday 5th - 09:40 - Room L-203
- NOI-02-007. Acoustic behaviour of circular mufflers with single inlet and double opposite outlet  
*Antebas, Antoine G.; Pedrosa, Ana M.; Denia, Francisco D.; Fuenmayor, F. Javier*  
S.04 Wednesday 5th - 10:00 - Room L-203
- NOI-02-008. Measurement of Impulsive Sound  
*Rasmussen, Gunnar; Rasmussen, Per*  
S.04 Wednesday 5th - 10:20 - Room L-203
- NOI-02-009. FEM/BEM numerical modeling of a diesel engine acoustic emission  
*Siano, Daniela; Amoroso, Francesco*  
S.04 Wednesday 5th - 10:40 - Room L-203
- NOI-02-010-IP. Psychoacoustic analysis of rattling noise inside vehicle cabins  
*Rossi, Federico; Nicolini, Andrea*  
Poster - Wednesday 5th morning - Board 10
- NOI-02-011. Subjective evaluation of air-conditioning sound in a vehicle using psychoacoustic parameters  
*Nakasaki, Ryota; Hasegawa, Hiroshi; Ozeki, Yukio; Onda, Masaharu; Kasuga, Masao*  
Poster - Wednesday 5th morning - Board 11
- NOI-03 – Industrial noise**
- NOI-03-001-IP. Does exposure to different realistic industrial noises cause distinguishable cochlear damage in awake guinea pigs?  
*Emmerich, Edeltraut; Linss, Volker; Linss, Werner; Richter, Frank*  
S.06 Thursday 6th - 09:00 - Room L-203
- NOI-03-002. An examination of some noisy plants in Istanbul according to the European directive  
*Ilgürel, Nuri; Serefhanoglu Sözen, Müjgan*  
S.06 Thursday 6th - 09:20 - Room L-203
- NOI-03-003. Psychoacoustic characterisation of the noise at the operator position of a compact loader during real working conditions  
*Carletti, Eleonora; Casazza, Camilla; Pedrielli, Francesca*  
S.06 Thursday 6th - 09:40 - Room L-203
- NOI-03-004. Aeroacoustic coupling of a misaligned jet-slot-oscillator with non-planar modes of a resonator  
*Glesser, Martin; Billon, Alexis; Valeau, Vincent; Sakout, Anas*  
S.06 Thursday 6th - 10:00 - Room L-203
- NOI-03-005. Effect of vaned diffuser on noise generated by vacuum cleaner suction units  
*Cudina, Mirko; Prezelj, Jurij*  
S.06 Thursday 6th - 11:20 - Room L-203
- NOI-03-006. Mitigation of noise generated by transformers of high tension electrical stations  
*Bellomini, Raffaella; Luzzi, Sergio; Borch, Francesco; Giorgi, Alberto; Gori, Manuel*  
Poster - Wednesday 5th morning - Board 12
- NOI-03-007. Noise exposure and work-related injury rate in woodworkers  
*Gomzi, Milica*  
Poster - Wednesday 5th morning - Board 13
- NOI-03-008. The identification of ultrasonic noise based on the questionnaire method  
*Smagowska, Bozena; Mikulski, Witold*  
Poster - Wednesday 5th morning - Board 14
- NOI-03-009. Evaluation of noise characteristics for sound absorbent materials and structures  
*Bratu, Polidor*  
Poster - Wednesday 5th morning - Board 15

- NOI-03-010. Technical means intended to reduce noise inside cabins provided on construction equipment  
*Bratu, Polidor*  
Poster - Wednesday 5th morning - Board 16
- NOI-03-011. Structural and functional analysis of the vibration insulation in case of construction machines cabin  
*Mihalcea, Aurelia*  
Poster - Wednesday 5th morning - Board 17
- NOI-04 – Noise measurements**
- NOI-04-001-IP. Noise emission analysis of a DMU train  
*Rusciano, Nicola; Viscardi, Massimo; Lecce, Leonardo*  
S.02 Tuesday 4th - 09:00 - Room L-203
- NOI-04-002. Computer aided system for acoustical data acquisition, updating and distribution  
*Bartłomiej Borkowski*  
S.02 Tuesday 4th - 09:20 - Room L-203
- NOI-04-003. The Virginia Tech Stability Wind Tunnel From an Aerodynamic Into an Aeroacoustic Facility  
*Camargo, Hugo; Remillieux, Marcel; Burdisso, Ricardo; Crede, Erin; Devenport, William*  
S.02 Tuesday 4th - 09:40 - Room L-203
- NOI-04-004. Identification and quantification of acoustic amplification for computing device enclosures  
*Córdova, José A., De la Guardia, Rafael; Beltman, Willem M.*  
S.02 Tuesday 4th - 10:00 - Room L-203
- NOI-04-005. Transducer Response Equalization  
*Gade, Svend; Schack, Tommy; Thorhauge, Ole*  
S.02 Tuesday 4th - 10:20 - Room L-203
- NOI-04-006. A proposal of the criterion for eliminating abnormal sounds contaminating the road traffic noise  
*Yuichi Kato; Tetsuro Saeki; Tamotsu Kitagawa*  
S.02 Tuesday 4th - 10:40 - Room L-203
- NOI-04-007. Measurement and assessment of exposure to noise in a working environment - difficulties and responsibilities  
*Krajcarz, Fabien*  
S.02 Tuesday 4th - 11:00 - Room L-203
- NOI-04-008. Traffic and industrial noise protection in urban areas – experience from Croatia  
*Lakusic, Stjepan; Vesna, Dragcevic; Dalibor, Bartos*  
S.02 Tuesday 4th - 11:20 - Room L-203
- NOI-04-009. Correlation factors between statistical pass-by and close-proximity noise level on Italian roads  
*Licitra, Gaetano; Losa, Massimo; Alfinito, Luca; Cerchiai, Mauro*  
S.02 Tuesday 4th - 11:40 - Room L-203
- NOI-04-010. Spherical nearfield acoustical holography with intercepting target spheres  
*Machetta, Igor; Nijman, Eugene J. M.*  
S.03 Tuesday 4th - 15:00 - Room L-203
- NOI-04-011. Assessment of impulse noise reduction from earmuff complex transmittance  
*Mlynski, Rafal; Zera, Jan*  
S.03 Tuesday 4th - 15:20 - Room L-203
- NOI-04-012. Why and how to determine peak workplace noise pressure measurement uncertainty  
*Rudno-Rudzinski, Krzysztof*  
S.03 Tuesday 4th - 15:40 - Room L-203
- NOI-04-013. Noise propagation of high-rise buildings in urban area  
*Shimizu, Takafumi; Takahashi, Daiji*  
S.03 Tuesday 4th - 16:00 - Room L-203

- NOI-04-014. Noise exposure and speech intelligibility in elementary schools in Tuscany  
*Sisto, Renata, Pieroni, Aldo, Delucis, Cinzia*  
S.03 Tuesday 4th - 16:20 - Room L-203
- NOI-04-015. Application of auditory brainstem response for predicting hearing protector attenuation  
*Zera, Jan; Kochanek, Krzysztof; Pilka, Adam; Mlynski, Rafal*  
S.03 Tuesday 4th - 16:40 - Room L-203
- NOI-04-016. Study on acoustic performance evaluation of edge-modified noise barriers  
*Namikawa, Yoshiharu; Yoshinaga, Hiroshi; Yamamoto, Yuichiro*  
Poster - Wenesday 5th morning - Board 18
- NOI-04-017. Experimental determination of sampling road noise measurement uncertainty  
*Rudno-Rudzinska, Barbara*  
Poster - Wenesday 5th morning - Board 19
- NOI-05 – Outdoor sound propagation**  
*Session Organizer: Michel Berengier*
- NOI-05-001-IP. Model experiments on shock wave interaction with the ground  
*Attenborough, Keith; Qin, Qin*  
S.07 Thursday 6th - 15:00 - Room L-203
- NOI-05-002-IP. Ground effect calculations for micro structured terrain  
*Heutschi, Kurt*  
S.07 Thursday 6th - 15:20 - Room L-203
- NOI-05-003-IP. A Benchmark on analytical and numerical models for road traffic noise propagation  
*Bérenghier, Michel; Duhamel, Denis; Gauvreau, Benoit; Droste, Bettina; Auerbach, Markus*  
S.07 Thursday 6th - 15:40 - Room L-203
- NOI-05-004-IP. Numerical simulation on long range outdoor sound propagation over non-flat terrains by the coupled FDTD-PE method  
*Takatashi, Yokota; Koichi, Makino; Yoshihiro, Hirao; Kohei, Yamamoto*  
S.07 Thursday 6th - 16:00 - Room L-203
- NOI-05-005-IP. Sound propagation in a valley-slope configuration: Measurements and simulations  
*Van Renterghem, Timothy; Botteldooren, Dick; Lercher, Peter*  
S.07 Thursday 6th - 16:20 - Room L-203
- NOI-05-006-IP. Meteorological classification for environmental acoustics – practical implications due to experimental accuracy and uncertainty  
*Junker, Fabrice; Gauvreau, Benoit; Ecotière, David; Crémézi-Charlet, Cora; Blanc-Benon, Philippe*  
S.07 Thursday 6th - 16:40 - Room L-203
- NOI-05-007-IP. Temporal fluctuation of atmospheric absorption of sound in various world regions during a year  
*Yoshihisa, Koichi; Okada, Yasuaki; Tatsuda, Kenji; Iwase, Teruo*  
S.07 Thursday 6th - 17:00 - Room L-203
- NOI-05-008-IP. Computational study of sound propagation over undulating water  
*Salomons, Erik*  
S.07 Thursday 6th - 17:20 - Room L-203
- NOI-05-009. Effect of the snow cover on near-ground sound wave propagation in the atmosphere  
*Krasnenko, Nikolay; Rakov, Denis*  
S.07 Thursday 6th - 17:40 - Room L-203
- NOI-05-010. Propagation of aircraft sonic boom through real atmospheres  
*Kästner, Martina; Heimann, Dietrich*  
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## **NOI-06 – Railway Noise**

*Session Organizer: Pierre-Étienne Gautier*

- NOI-06-001-IP. Acoustic sources characterisation on railway vehicle for prediction and audio synthesis of pass-by noise  
*Bongini Estelle, Molla Stephane, Gautier Pierre-Étienne, Habault Dominique, Mattei Pierre-Olivier, Poisson Franck*  
**S.01 Monday 3rd - 15:00 - Room L-203**
- NOI-06-002-IP. High speed train noise propagation at mid-ranges  
*Cotté, Benjamin; Blanc-Benon, Philippe; Cremezi-Charlet, Cora; Poisson, Franck*  
**S.01 Monday 3rd - 15:20 - Room L-203**
- NOI-06-003-IP. High speed trains external noise: recent results in the TGV case  
*Gautier, Pierre-Étienne; Poisson, Franck ; Létourneaux, Fabien*  
**S.01 Monday 3rd - 15:40 - Room L-203**
- NOI-06-004-IP. Psychomechanics applied to a plate/cavity system and train coaches  
*Guibert, Emmanuelle; Habault, Dominique; Gautier, Pierre-Étienne; Poisson, Franck*  
**S.01 Monday 3rd - 16:00 - Room L-203**
- NOI-06-005-IP. The reduction of railway noise in the European integrated project Silence  
*Poisson Franck; Gautier Pierre-Étienne*  
**S.01 Monday 3rd - 16:20 - Room L-203**
- NOI-06-006-IP. Sensitive structures subject to ground vibrations  
*Sagasetta, César; Sánchez-Alciturri, José M.*  
**S.01 Monday 3rd - 16:40 - Room L-203**
- NOI-06-007. Experimental characterization and numerical modelling of the squeal noise generated by railway disc brakes  
*Chiello, Olivier; Lorang, Xavier; Cordier, Jean-François; Margiocchi, Florence*  
**S.01 Monday 3rd - 17:00 - Room L-203**
- NOI-06-008. Noise mapping for railway noise: Assessment of Nmpb method as implemented in different software, comparison with Rmr method  
*Tellado Nagore; Gautier Pierre-Étienne; Poisson Franck; Pinaqui Stephanie*  
**S.01 Monday 3rd - 17:20 - Room L-203**
- NOI-06-009. Noise and vibration measurements of curve squeal noise due to trams on the track  
*Volz, Rudi; Feldmann, Joachim*  
**S.01 Monday 3rd - 17:40 - Room L-203**

## **NOI-07 – NOI-General**

- NOI-07-001. Dynamic urban traffic noise: do individualized emission laws improve estimation?  
*Can, Arnaud; Leclercq, Ludovic; Lelong, Joël*  
**S.06 Thursday 6th - 10:40 - Room L-203**
- NOI-07-002. A Proposed Acoustical Standard for Correctional Facility Housing Units  
*Christoff, Jerry P.*  
**S.06 Thursday 6th - 11:00 - Room L-203**
- NOI-07-003. Method of quantification of the subjective satisfaction by the increase of the house value before the attenuation/elimination of the transit noise in the great arteries due to performances of urban rehabilitation in Barcelona  
*Daumal, Francesc; De Gortari, Jimena*  
**S.06 Thursday 6th - 11:20 - Room L-203**
- NOI-07-004. Karaoke: Another 2 edges acoustic source  
*Elizondo-Garza, Fernando J.; Villalobos-Luna, José de Jesús*  
**S.06 Thursday 6th - 11:40 - Room L-203**

- NOI-07-005. Noisy audio sources separation by independent component analysis and modal distribution  
*Lamya Fergani; Amrane Houacine*  
S.08 Friday 7th - 09:00 - Room L-203
- NOI-07-006. Optimal step size of frequency domain adaptive algorithm for active noise control systems using simultaneous equations method  
*Kensaku, Fujii; Yusuke, Iwamatsu; Tadashi, Ujino; Mitsuji, Muneyasu*  
S.08 Friday 7th - 09:20 - Room L-203
- NOI-07-007. The integral fight against the urban noise. performances in the city of Leon (Spain)  
*E. García Ortiz, M. Fuentes Robles, J. Cepeda Riaño, G. Búrdalo Salcedo, M. de Barrios Carra, D. García de la Peña*  
S.08 Friday 7th - 09:40 - Room L-203
- NOI-07-008. Screen use possibilities as protection from transport noise and prospects of their improvement  
*Danielius Gu as; Robertas Klimas; Vaclovas Tri\_ys*  
S.08 Friday 7th - 10:00 - Room L-203
- NOI-07-009. Development of a social survey method on traffic noise using the Internet and the geographic information system (GIS)  
*Jiro Kaku, Takatoshi Yokota, Seiichiro Namba, Seigou Ogata, and Ichiro Yamada*  
S.08 Friday 7th - 10:20 - Room L-203
- NOI-07-010. A study of sound shielding efficiency of ear muffs combined with piezoelectric polymer films  
*Kodama, Hidekazu; Date, Munehiro; Yamamoto, Kohei; Fukada, Eiichi*  
S.08 Friday 7th - 10:40 - Room L-203
- NOI-07-011. The assessment of noise nuisance in the neighbourhood – ÖAL guideline No. 3 Part 1  
*Lechner, Christoph; Talasch, Werner*  
S.08 Friday 7th - 11:00 - Room L-203
- NOI-07-012. Assessment of occupational noise exposure in quarries and gravel pits within the Madrid region  
*Pavón, Ignacio; Recuero, Manuel*  
S.08 Friday 7th - 11:20 - Room L-203
- NOI-07-013. Approximate reconstruction of sound fields close to the surface of arbitrarily shaped sound sources using NAH  
*Prager, Jens; Petersson, Bjoern A.T.*  
S.08 Friday 7th - 11:40 - Room L-203
- NOI-07-014. QCITY – A concept for noise mapping, ranking, hot spot detection and action planning  
*Probst, Wolfgang*  
S.06 Thursday 6th - 11:00 - Room L-202
- NOI-07-015. Many laws and little noise in the local agenda policy and management of the environment and urban noise (Venezuela)  
*Ferrer, Mercedes; Quintero, Carolina*  
S.06 Thursday 6th - 11:20 - Room L-202
- NOI-07-016. Reduction of annoyance by masking with a steady or fluctuating sound  
*Tamesue, Takahiro; Saeki Tetsuro; Itoh, Kazunori*  
S.06 Thursday 6th - 11:40 - Room L-202
- NOI-07-017. A suggestion of noise reduction wall with acoustic Fresnel lens and active noise control system  
*Ishii, Hiroaki; Nakayama, Masato; Nishiura, Takanobu; Nakagawa, Shinichi*  
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- NOI-07-018. Characterization of the noise emitted by trolley buses and development of a noise emission model  
*Lelong, Joel; Chatagnon, Roger*  
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## PHY – Physical Acoustics

### PHY-02 – Acoustics of porous media

*Session Organizer: Tomás E. Gómez Álvarez-Arenas*

- PHY-02-001. Comparison of different inversion techniques for determining physical parameters of porous media  
*Bonfiglio, Paolo; Pompoli, Francesco*  
S.01 Monday 3rd - 16:00 - Room R-202
- PHY-02-002. Influence of the acoustical properties of materials on the performance of earplug protectors for impulsive noise  
*Vergara, Erasmo F.; Gerges, Samir N. Y.*  
S.01 Monday 3rd - 16:20 - Room R-202
- PHY-02-003. Effect of screens on absorbent systems  
*Nesrine Amirouche; Emmanuel Gourdon, François-Xavier Bécot*  
S.01 Monday 3rd - 16:40 - Room R-202
- PHY-02-004. Study of acoustic properties of cork compact  
*Kellati, Nor-edine; El Bouardi, Abdelmajid; Ajzoul, Taib; Ezbakhe, Hassan*  
Poster - Wednesday 5th morning - Board 23
- PHY-02-005. Study and design of a composite acoustic sensor to characterize an heterogeneous media presenting a complex matrix  
*Georges Nassar, Alain Skaf, Fabrice Lefebvre, Bertrand Nongaillard*  
Poster - Wednesday 5th morning - Board 24

### PHY-03 – Acoustics of unconsolidated granular media

*Session Organizer: Vitalyi Goussev*

- PHY-03-001-IP. Mechanical energy propagation in granular alignments: Basic physics and potential applications  
*Sen, Surajit*  
S.01 Monday 3rd - 17:00 - Room R-202
- PHY-03-002-IP. Ultrasonic wave transport in phononic crystal and disordered mesostructures made from weakly consolidated aluminum beads  
*Page, John; Hu, Hefei*  
S.01 Monday 3rd - 17:20 - Room R-202
- PHY-03-003-IP. Time-Frequency analysis of dispersion relation in a constrained triangular lattice of beads  
*Coste, Christophe; Gilles, Bruno*  
S.01 Monday 3rd - 17:40 - Room R-202
- PHY-03-004-IP. Nonlinear coda-type acoustic signals in granular media  
*Tournat, Vincent; Gusev, Vitalyi*  
S.02 Tuesday 4th - 09:00 - Room R-202
- PHY-03-005-IP. Sound propagation in dense granular packings and its implication to seismology  
*Jia Xiaoping, Johnson Paul A*  
S.02 Tuesday 4th - 09:20 - Room R-202
- PHY-03-006-IP. Nonlinear acoustic precursors of avalanche-type events in granular packing: laboratory demonstrations  
*V.Yu. Zaitsev, P. Richard, R. Delannay, V. Tournat, V.E. Gusev*  
S.02 Tuesday 4th - 09:40 - Room R-202
- PHY-03-007-IP. Surface elastic waves in granular media under gravity and their relation to booming avalanches  
*Bruno Andreotti*  
S.02 Tuesday 4th - 10:00 - Room R-202
- PHY-03-008-IP. Experimental determination of the phase velocities of guided acoustic modes in granular media  
*X. Jacob, P. Leclaire, V. Aleshin, V. Tournat, D. Dazel, W. Lauriks, J. F. Allard, V. Gusev*  
S.02 Tuesday 4th - 10:20 - Room R-202

- PHY-03-009-IP. Evaluation of the mechanical properties of granular media at low pressures  
*Jacob, Xavier; Tournat, Vincent ; Aleshin, Vladislav; Gusev, Vitali*  
S.02 Tuesday 4th - 10:40 - Room R-202
- PHY-03-010-IP. Acoustic modes induced by force chains in granular lattices  
*Inserra, Claude ; Tournat, Vincent ; Gusev, Vitaliy*  
S.02 Tuesday 4th - 11:00 - Room R-202
- PHY-03-011. Guiding of acoustic waves beneath the surface of an unconsolidated granular crystal  
*Gusev, Vitaliy; Tournat, Vincent*  
S.02 Tuesday 4th - 11:20 - Room R-202
- PHY-03-012. New semi-empirical model for sound propagation in adsorbing microporous solids(activated carbon)  
*Bechwati, Fouad; Umnova, Olga; Cox, Trevor J.*  
S.02 Tuesday 4th - 11:40 - Room R-202

#### PHY-04 – Adaptive and active materials

*Session Organizers: Marie-Annick Galland; María Cuesta*

- PHY-04-001-IP. Component mode synthesis finite element model of a smart double-plate panel  
*Batifol, Cedric; Ichchou, Mohamed; Galland, Marie-Annick*  
S.03 Tuesday 4th - 16:40 - Room R-202
- PHY-04-002-IP. Numerical analysis of smart foam for acoustic absorption  
*Leroy, Pierre; Berry, Alain; Atalla, Noureddine; Herzog, Philippe*  
S.03 Tuesday 4th - 17:00 - Room R-202
- PHY-04-003-IP. Modelling of poroelastic layers with mass implants improving acoustic absorption  
*Zielinski, Tomasz G.*  
S.03 Tuesday 4th - 17:20 - Room R-202
- PHY-04-004. Photoelastic properties of nontransparent crystals  
*Farkhad, Akhmedzhanov*  
S.03 Tuesday 4th - 17:40 - Room R-202
- PHY-04-005-IP. Reduction of the noise transmitted by an enclosure thanks to active absorbers  
*Dupont, Jean-Baptiste; Galland, Marie-Annick*  
S.04 Wednesday 5th - 09:00 - Room R-202
- PHY-04-006-IP. Control of low-frequency wall reflections in an anechoic room: estimation of the scattered sound from wall measurements  
*Gintz, Alexandre; Friot, Emmanuel*  
S.04 Wednesday 5th - 09:20 - Room R-202
- PHY-04-007-IP. Direct assessment of acoustic quantities within active materials  
*Lissek, Hervé*  
S.04 Wednesday 5th - 09:40 - Room R-202
- PHY-04-008-IP. A new reverberation enhancement system – Carmencita  
*Schmich, Isabelle; Chervin Paul; Maillard, Julien; Rougier, Christophe*  
S.04 Wednesday 5th - 10:00 - Room R-202

#### PHY-05 – Aeroacoustic sensing for urban warfare applications

*Session Organizer: Tien Pham*

- PHY-05-001-IP. Acoustic sensing for urban battlefield applications  
*Pham, Tien*  
S.03 Tuesday 4th - 15:00 - Room R-202
- PHY-05-002-IP. Acoustic Detection and Localization for Defense and Security Applications  
*Naz, Pierre; Hengy, Sébastien; Hamery, Pascal; Marty, Christophe*  
S.03 Tuesday 4th - 15:20 - Room R-202

- PHY-05-003-IP. Performance Metrics for Acoustic Small Arms Localization Systems  
*Bédard, Jacques*  
S.03 Tuesday 4th - 15:40 - Room R-202
- PHY-05-004-IP. A Biomimetic Acoustic Direction Finding System  
*Hubbard, Allyn; Anderson, David; Chiu, Matt; Freedman, David; Gore, N. ; Karl, Christian; Mountain, David; Nourzad, Marianne; Pu, Yirong; Aleksandrs Zosuls; Socrates, Deligeorges*  
S.03 Tuesday 4th - 16:00 - Room R-202
- PHY-05-005. Infrasonic precursor of tropical cyclone  
*Naugolnykh, Konstantin ; Rybak, Samuil*  
S.03 Tuesday 4th - 16:20 - Room R-202
- PHY-06 – Dispersion and attenuation of sound in various materials**
- PHY-06-001. A self-consistent effective medium theory for the sound propagation in concentrated suspensions of rigid particles  
*Baudoin, Michael; Thomas, Jean-Louis; Coulouvrat, François; Lhuillier, Daniel*  
S.04 Wednesday 5th - 10:20 - Room R-202
- PHY-06-002. Measure in tube of impedance of different types of wood  
*M. Teresa Lorenzana Lorenzana; J. Canedo Monasterio; L. García Sastre; J. González Suárez*  
S.04 Wednesday 5th - 10:40 - Room R-202
- PHY-06-003. Ultrasonic attenuation and piezoelectric properties at phase transitions of layered polar crystals OF  $\text{CuInP}_2\text{S}_6$  family  
*Samulionis, Vytautas; Banys, Juras and Vysochanskii, Yulian*  
S.04 Wednesday 5th - 11:00 - Room R-202
- PHY-06-004. Acoustical Dissipation in Thallous Halides  
*R.K. Singh, Rishipal Singh, M. P. Singh*  
S.04 Wednesday 5th - 11:20 - Room R-202
- PHY-06-005. Coherent wave in a fluid slab-like region containing a random distribution of elastic scatterers: Experiments  
*Tinel, Alain; Luppé, Francine; Conoir, Jean-Marc*  
S.04 Wednesday 5th - 11:40 - Room R-202
- PHY-06-006. Visualizing sound travelling through periodic structures  
*Wright, Oliver; Profunser, Dieter; Matsuda, Osamu; Khelif, Abdelkrim; Laude, Vincent; Benchabane, Sarah; Tanaka, Yukihiro*  
S.05 Wednesday 5th - 15:00 - Room R-202
- PHY-06-007. Analysis of acoustic fields in elastic media with microdefects by using laser interferometry  
*Zhitluhina, Julia; Perov, Dmitry; Rinkevich, Anatoly*  
S.05 Wednesday 5th - 15:20 - Room R-202
- PHY-06-008. Analysis of guided acoustic waves in piezoelectric semiconductor plates  
*Collet, Bernard*  
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- PHY-06-009. The use of Ultrasonic Signals to Estimate the Damage Condition of Materials after Static and Fatigue Loading  
*V.V. Mishakin*  
Poster - Wenesday 5th morning - Board 26
- PHY-06-010. The Energy Characteristics of Acoustic Waves in Dissipative Piezoelectric Materials and Structures  
*Teplykh, Andrei; Zaitsev, Boris; Kuznetsova, Iren*  
Poster - Wenesday 5th morning - Board 27
- PHY-06-011. Acousto-optic method development for the acoustic behaviour study of some materials metallic and no metallic  
*Ferria Kouider; Laouar Naamane*  
Poster - Wenesday 5th morning - Board 28

- PHY-06-012. Optimization of the acoustic attenuation of sonic crystals by means of the creation of vacancies  
*Fuster-García, Elies; Romero-García, Vicent; García Raffi, L.Miguel; Sánchez-Pérez, J.Vicente; Blasco, Xavier; Herrero, J.Manuel*  
Poster - Wenesday 5th morning - Board 29
- PHY-06-013. The broadband ultrasonic absorption in the water-based magnetic liquid as a function of the magnetic field strength  
*Hornowski, Tomasz*  
Poster - Wenesday 5th morning - Board 30
- PHY-06-014. Refraction index behaviour of sonic crystals in the range of low frequencies  
*Fuster-García, Elies; Romero-García, Vicent; García Raffi, L.Miguel; Sánchez-Pérez, J.Vicente*  
Poster - Wenesday 5th morning - Board 31
- PHY-06-015. Control of noise using mixed structures based on sonic crystals  
*Romero-García, Vicent; Fuster-García, Elies; García Raffi, L.Miguel; Sánchez-Pérez, J.Vicente*  
Poster - Wenesday 5th morning - Board 32
- PHY-07 – Standing waves**  
*Session Organizers: Gerard Maze; Peter Rogers*
- PHY-07-001-IP. Resonances, Rays, and Acoustic Beams: Applications to Scatteri  
*Marston, Philip L.*  
S.05 Wednesday 5th - 15:40 - Room 202
- PHY-07-002-IP. Resonance modes of immersed type I and type II transversely isotropic clad rods  
*Sodagar, Sina; Honarvar, Farhang; Sinclair, Anthony N.*  
S.05 Wednesday 5th - 16:60 - Room 202
- PHY-07-003-IP. Resonance scattering from a ribbed finite cylindrical shell  
*Tran-Van-Nhieu, Michel*  
S.05 Wednesday 5th - 16:20 - Room 202
- PHY-07-004-IP. A few exemples of resonances ion multiple scattering  
*Conoir, Jean-Marc*  
S.05 Wednesday 5th - 16:40 - Room 202
- PHY-07-005-IP. Classification of an object buried in sand by an acoustic resonance spectrum method  
*Gérard Maze, Dominique Decultot, Katia Cacheleux,*  
S.05 Wednesday 5th - 17:00 - Room 202
- PHY-07-006-IP. Edge resonances in semi-infinite thick pipe: theoretical predictions and measurements  
*Ratassepp, Madis; Klauson, Aleksander; Chati, Farid; Léon, Fernand; Maze, Gérard*  
S.05 Wednesday 5th - 17:20 - Room 202
- PHY-07-007-IP. Three-dimensional edge waves in semi-infinite elastic plates  
*Kaplunov, Julius; Prikazchikov, Danila; Zernov, Victor*  
S.05 Wednesday 5th - 17:40 - Room 202
- PHY-07-008. Experimental identification of very low frequency flexural vibration modes of partly submerged plate  
*Décultot, Dominique; Chati, Farid; Maze. Gérard; Klauson, Aleksander*  
S.06 Thursday 6th - 09:00 - Room R-202
- PHY-07-009. Transmission of radial waves through an helical spring  
*É. Rosenkrantz, J.Y. Ferrandis, J. Mathieu and G. Lévêque*  
S.06 Thursday 6th - 09:20 - Room R-202
- PHY-07-010. Intensity measurement of a periodic shock wave in a resonator  
*Biwa, Tetsushi; Yazaki, Taichi*  
S.06 Thursday 6th - 09:40 - Room R-202

- PHY-07-011. Astride localization in cavities filled with an irregular absorber  
*Félix, Simon; Sapoval, Bernard; Filoche, Marcel; Asch, Mark*  
S.06 Thursday 6th - 10:00 - Room R-202
- PHY-07-012. Proposal an empirical model for absorbent acoustical materials based in kenaf  
*del Rey Tormos, Romina; Alba Fernández, Jesús; Sanchos, Vicente*  
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- PHY-08 – PHY-General**
- PHY-08-001. Sound Attenuation in Ducts Utilizing Spatially Periodic Area Changes with Absorbing Material  
*Bliss, Donald; Franzoni, Linda; Burton, Lisa*  
S.06 Thursday 6th - 10:20 - Room R-202
- PHY-08-002. A noniterative linear method for locating sources based on measuring receiver arrival times  
*Militello, Carmelo; Buenafuente, Sergio*  
S.06 Thursday 6th - 10:40 - Room R-202
- PHY-08-003. Enhanced acoustical transmission through a subwavelength aperture flanked by surface corrugations  
*Christensen, Johan; Garcia-Vidal, Francisco Jose*  
S.06 Thursday 6th - 11:00 - Room R-202
- PHY-08-004. Experimental wave number separation of wall-pressure fluctuations beneath a Turbulent Boundary Layer  
*Debert, Sébastien; Pachebat, Marc; Valeau, Vincent; Gervais, Yves*  
S.06 Thursday 6th - 11:20 - Room R-202
- PHY-08-005. Acoustic and hydrodynamic modes generated by a point source in a duct carrying a parallel shear flow  
*Félix, Simon ; Pagneux, Vincent*  
S.06 Thursday 6th - 11:40 - Room R-202
- PHY-08-006. Acoustic field modelling in a quasi-spherical resonator for the determination of the Boltzmann constant  
*Guianvarc'h, Cécile; Pitre, Laurent; Bruneau, Michel; Bruneau, Anne-Marie*  
S.07 Thursday 6th - 15:00 - Room R-202
- PHY-08-007. Sound absorption by an active resonator in a tube and in an enclosure  
*Kanev, Nikolay; Mironov, Mikhail*  
S.07 Thursday 6th - 15:20 - Room R-202
- PHY-08-008. Linear waves in bubbly liquid and equilibrium bubble size distribution  
*Kovinskaya, Svetlana*  
S.07 Thursday 6th - 15:40 - Room R-202
- PHY-08-009. Dynamic spectral analysis of the ir heterolaser radiation change under ultrasonic strain  
*Kulakova, Ludmila; Tarasov, Ilya; Yakhkind, Eduard*  
S.07 Thursday 6th - 16:00 - Room R-202
- PHY-08-010. New method for the calculation of the thermodynamical properties of fluids starting from accurate speed of sound measurements  
*Lago, Simona; Giuliano Albo, Alberto; Madonna Ripa, Daniele*  
S.07 Thursday 6th - 16:20 - Room R-202
- PHY-08-011. Acoustic properties of thin-walled elastic tube, containing polymeric liquid with fine bubbles  
*Levitsky, Semyon; Bergman, Rudolf; Haddad, Jehuda*  
S.07 Thursday 6th - 16:40 - Room R-202
- PHY-08-012. Ultrasonic investigations of water mixtures with polyethylene glycols, from 200 to 1540 and ethylene glycol  
*Wioletta Zwirbla, Anna Sikorska, Bogumil, B.J. Linde*  
S.07 Thursday 6th - 17:00 - Room R-202

- PHY-08-013. Attenuation of Eigen modes in wells and pipes due to their scattering on the rough inner surface  
*Maximov, German; Horoshenkov, Kirill; Ortega, Elina; Podjachev, Evgeny; Rybak, Samuil*  
S.07 Thursday 6th - 17:20 - Room R-202
- PHY-08-014. Nondiffractive propagation in sonic crystals  
*Espinosa, Victor; Sánchez Morcillo, Victor J., Pérez-Arjona, Isabel, Staliunas, Kestutis; Redondo, Javier*  
S.07 Thursday 6th - 17:40 - Room R-202
- PHY-08-015. Application of Phase Adjuster for Improvement in the Efficiency of Energy Conversion from Heat to Sound in Thermoacoustic System  
*Sakamoto, Shin-ichi; Nishikawa, Masahiro; Ishino, Takahiro; Watanabe, Yoshiaki*  
S.08 Friday 7th - 09:00 - Room R-202
- PHY-08-016. Application of photoacoustic technique for detecting associated structures in dioxane-water solution  
*Sikorska, Anna; Bogumil, Linde; Sliwinski, Antoni*  
S.08 Friday 7th - 09:20 - Room R-202
- PHY-08-017. Acoustic radiation force: a unique tool for elasticity imaging and HIFU therapy in the domain of MRI and Ultrasound  
*Sinkus, Ralph; Mickael Tanter, Jean-Francois Aubry, Jean-Luc Gennisson, Mathias Fink*  
S.08 Friday 7th - 09:40 - Room R-202
- PHY-08-018. Different Zakharenko waves in layered and quantum systems  
*A.A. Zakharenko*  
S.08 Friday 7th - 10:00 - Room R-202
- PHY-08-019. Application possibilities of the artificial intelligence elements for recognizing the acoustic emission signals generated by partial discharges  
*Sebastian Borucki, Andrzej Cicho, Marcin Lorenc, Tomasz Boczar*  
S.08 Friday 7th - 10:20 - Room R-202
- PHY-08-020. Optimization of the acoustic attenuation of Sonic Crystals by means of the creation of vacancies  
*Sánchez Pérez, Juan Vicente; Romero-García, Vicent; Fuster-García, Elies; García-Raffi, Luis Miguel*  
S.08 Friday 7th - 10:40 - Room R-202
- PHY-08-021-IP. New class of surface acoustic waves in the unmagnetic dielectric  
*Lapteva Tetyana, Tarasenko S.V., Shavrov V.G.*  
S.08 Friday 7th - 11:00 - Room R-202
- PHY-08-022. The sound wave reflection from the corrugated plane streamed by the parallel shear flow [generalized Miles mechanism]  
*Solntseva, Vasilisa; Mironov, Mikhail; Kopiev, Victor*  
S.08 Friday 7th - 11:20 - Room R-202
- PHY-08-023. The comparison of the calibration method of measurement paths used in acoustic diagnostics of insulation systems  
*Marcin Lorenc; Tomasz Boczar; Sebastain Borucki; Andrzej Cichon*  
S.08 Friday 7th - 11:40 - Room R-202
- PHY-08-024. The negative acoustic refraction of 1D magnetic phononic crystal  
*Tarasenko, Olga; Tarasenko, S.V.; Yurchenko, V.M.*  
S.08 Friday 7th - 09:00 - Room R-101
- PHY-08-025. Applications of Directional Acoustics Technique  
*Yangze Dong, Peng Sun, Pingxiang Liu*  
Poster - Wenesday 5th morning - Board 34
- PHY-08-026. Improving energy conversion efficiency in a thermoacoustic cooling system ~ Property of energy conversion placing high heat conductivity material on top of the stack adjacent areas of the heat source ~  
*Miya, Naoki; Sakamoto, Shin-ichi; Kondo, Masahiro; Watanabe, Yoshiaki*  
Poster - Wenesday 5th morning - Board 35

- PHY-08-027. The acoustic pulse signal diffraction on different reflectors in an elastic medium  
*Perov, Dmitry; Rinkevich, Anatoly*  
Poster - Wednesday 5th morning - Board 36
- PHY-08-028. Basic study for the miniaturization of thermoacoustic cooler ~ Determination of an insertion position and channel radius of the stack ~  
*Tsuji, Yoshiyuki; Sakamoto, Shin-ichi; Ishino, Takahiro; Watanabe, Yoshiaki*  
Poster - Wednesday 5th afternoon - Board 01
- PHY-08-029. Basic study for the miniaturization of thermoacoustic cooling system ~ Relationship between  $\Omega T$  and total length ~  
*Wakata, Tetsuya; Sakamoto, Shin-ichi; Nishikawa, Masahiro; Watanabe, Yoshiaki*  
Poster - Wednesday 5th afternoon - Board 02

### PPA – Physiological and Psychological Acoustics

#### PPA-01 – Algorithmic music analysis and processing

*Session Organizer: Martin Mc Kinney*

- PPA-01-001-IP. Optimizing Hearing Aids for Music Listening  
*Wessel, David; Fitz, Kelly; Battenberg, Eric; Schmeder, Andrew; Edwards, Brent*  
S.01 Monday 3rd - 16:40 - Room L-402
- PPA-01-002-IP. Perceptual Constraints for Music Information Retrieval Systems  
*McKinney, Martin F.; Skowronek, Janto; Novello, Alberto*  
S.01 Monday 3rd - 17:00 - Room L-402
- PPA-01-003-IP. Towards polyphonic musical instruments recognition  
*Richard, Gaël; Leveau, Pierre; Daudet, Laurent; Essid, Slim; David, Bertrand*  
S.01 Monday 3rd - 17:20 - Room L-402
- PPA-01-004. Tools for Analysis of Musical Expression  
*Dixon, Simon*  
S.01 Monday 3rd - 17:40 - Room L-402

#### PPA-02 – Applications of psychoacoustics

*Session Organizers: Hugo Fastl; Alfred Zeitler*

- PPA-02-001-IP. Master Scaling in Psychoacoustics  
*Berglund, Birgitta; Nilsson, Mats E.*  
S.03 Tuesday 4th - 15:00 - Room L-401
- PPA-02-002-IP. Dissimilarity ratings of in-car sounds: comparison between in-situ and laboratory experiments  
*Parizet, Etienne; Langlois, Sabine; Richard, Florent*  
S.03 Tuesday 4th - 15:20 - Room L-401
- PPA-02-003-IP. How does annoyance judgement depend on the context effect?  
*Anna Preis, Honorata Hafke, Tomasz Kaczmarek*  
S.03 Tuesday 4th - 15:40 - Room L-401
- PPA-02-004-IP. The functional imagery and sound quality of auditory signals  
*Iwamiya, Shin-ichiro; Fujita, Aiko; Taguchi, Manabu*  
S.03 Tuesday 4th - 16:00 - Room L-401
- PPA-02-005-IP. Nonmonotonic behaviour of psychoacoustic unpleasantness as a function of sharpness  
*Weber, Reinhard; Eilers, Reef*  
S.03 Tuesday 4th - 16:20 - Room L-401
- PPA-02-006-IP. Just noticeable sound differences in cars - results of psychoacoustic testing based on an ASD-system  
*Martner, Otto; Schirmacher, Rolf; Zerbs, Carsten; Simon, Laura*  
S.03 Tuesday 4th - 16:40 - Room L-401

- PPA-02-007-IP. Slow sinusoidal phase rotation as a carrier for embedding watermarks in audio signals  
*Suzuki, Yôiti; Nishimura, Ryouichi; and SÈk, Aleksander*  
S.03 Tuesday 4th - 17:00 - Room L-401
- PPA-02-008-IP. Spatial psychoacoustics as the basis for innovations in the field of audio coding and processing  
*Jeroen Breebaart, Armin Kohlrausch, Steven van de Par*  
S.03 Tuesday 4th - 17:20 - Room L-401
- PPA-02-009-IP. Generation of Quality Taxonomies for Auditory Virtual Environments by Means of a Systematic Expert Survey  
*Andreas Silzle*  
S.03 Tuesday 4th - 17:40 - Room L-401
- PPA-02-010-IP. Auditory scene analysis and the precedence-effect with cochlear implants-prediction from simulation  
*Seeber, Bernhard U.*  
S.04 Wednesday 5th - 09:00 - Room L-401
- PPA-02-011-IP. Psychoacoustic evaluation of sound absorbing road surfaces  
*Fastl, Hugo; Patsouras, Christine; Bayer, Stephan; Beckenbauer, Thomas*  
S.04 Wednesday 5th - 09:20 - Room L-401
- PPA-02-012-IP. Psychacoustical Evaluation of Traffic Noise  
*Genuit, Klaus; Guidati, Sandro; Rossberg, Sebastian*  
S.04 Wednesday 5th - 09:40 - Room L-401
- PPA-02-013-IP. Psychoacoustic predictive modeling of traffic sound  
*Bisping, Rudolf*  
S.04 Wednesday 5th - 10:00 - Room L-401
- PPA-02-014-IP. Sound quality of railway noise with and without barrier – A laboratory study  
*Khan, Shafiquzzaman*  
S.04 Wednesday 5th - 10:20 - Room L-401
- PPA-02-015-IP. Application of vibro-acoustic and psychoacoustic protocols for the evaluation of interior noise in the aircraft cabin  
*Mellert, Volker; Weber, Reinhard*  
S.04 Wednesday 5th - 10:40 - Room L-401
- PPA-02-016. Development of local sound resources to introduce the concept of soundscape  
*Kang, Sang-Woo; Jeon, Ji-hyeon; Kook, Chan*  
S.04 Wednesday 5th - 11:00 - Room L-401
- PPA-02-017. Improvement of the working place through psychoacoustic assessment of the noise emitted by the machines  
*Fernández, Marcos D.; Recuero, Manuel; Ballesteros, Jose A.; Blas, Jose M.*  
S.04 Wednesday 5th - 11:20 - Room L-401
- PPA-02-018. Evaluation of the SAFRS application to create environmental friendly acoustic environment  
*Jeon, Ji-hyeon; Kook, Chan; Jang, Gil-Soo*  
S.04 Wednesday 5th - 11:40 - Room L-401
- PPA-02-019. Auditory evaluation of sounds radiated from a vibrating plate inside a damped cavity: Adjustment of the computational efforts in frequency  
*Trollé, Arnaud; Hamzaoui, Nacer; Marquis-Favre, Catherine*  
S.05 Wednesday 5th - 15:00 - Room L-401
- PPA-02-020. Car door closure sounds: characterization of perceptual properties through analysis-synthesis approach  
*Bézat, Marie-Céline; Roussarie, Vincent; Voinier, Thierry; Kronland-Martinet, Richard; Ystad Sølvi*  
S.05 Wednesday 5th - 15:20 - Room L-401
- PPA-02-021. Design of product sound by blending of sound sources  
*Nykänen, Arne; Johansson, Örjan*  
S.05 Wednesday 5th - 15:40 - Room L-401



- PPA-02-022. Acoustic Signature of Hard, Crispy, Crackly, Crunchy and Snappy  
*Reynaud, Boris; Antille, Nicolas; Voiron-Baliguet, Elisabeth; Martin, Nathalie*  
S.05 Wednesday 5th - 16:00 - Room L-401
- PPA-02-023. Just noticeable difference of sound quality metrics of refrigerator noise  
*You, Jin; Jeon, Jin Yong*  
S.05 Wednesday 5th - 16:20 - Room L-401
- PPA-02-024. Evaluation of human emotions depending on variations in audio-visual landscape  
*Shin Yong-Gyu, Jeon Ji-Hyeon, Kook Chan, Kim Sun-Woo*  
S.05 Wednesday 5th - 16:40 - Room L-401
- PPA-02-025. A study on the degree of disturbance by meaningful and meaningless noise under the brain task  
*Tsujimura, Sohei; Yamada, Yukiko*  
S.05 Wednesday 5th - 17:00 - Room L-401
- PPA-02-026. Perceptual consequences of change in vocoded speech parameters for various reverberation conditions  
*Drgas, Szymon; Blaszkak, Magdalena*  
S.05 Wednesday 5th - 17:20 - Room L-401
- PPA-02-027. An Attempt to Construct a Quantitative Scale of the Cheerfulness of Music Implementing Spectral Centroid  
*Masashi Yamada*  
S.05 Wednesday 5th - 17:40 - Room L-401
- PPA-02-028. An efficient alternative to the paired comparison method for the subjective evaluation of a large set of sounds  
*Chevret, Patrick; Parizet, Etienne*  
S.06 Thursday 6th - 09:00 - Room L-401
- PPA-02-029. Enhancing Perceived Sportiness of Vehicles by Means of Sound Engineering  
*Alfred Zeitler*  
S.06 Thursday 6th - 09:20 - Room L-401
- PPA-02-030. Psychoacoustical indicators of acoustical comfort inside trains for background noise and emergent signals  
*I. Bouillet; G. Rabau; S. Meunier; F. Poisson*  
Poster - Wednesday 5th afternoon - Board 03
- PPA-02-031. Subjective evaluation of artifacts of various sound compressing systems  
*Husník, Libor; Herrera-Martinez, Marcelo*  
Poster - Wednesday 5th afternoon - Board 04
- PPA-03 – Audio-visual interaction**  
*Session Organizer: Armin Kohlrausch*
- PPA-03-001-IP. Auditory-visual perception of room size in virtual environments  
*Larsson, Pontus; Våljamäe, Aleksander*  
S.02 Tuesday 4th - 09:00 - Room L-402
- PPA-03-002-IP. Effects of auditory and visual information on the perceived direction of self-motion  
*Shuichi Sakamoto; Yôiti Suzuki; Jiro Gyoba*  
S.02 Tuesday 4th - 09:20 - Room L-402
- PPA-03-003. Audio-Visual Integration of Biological Motion  
*Meyer, Georg; Crocker-Buque, Alexander; Wuerger, Sophie*  
S.02 Tuesday 4th - 09:40 - Room L-402
- PPA-03-004. Sound source localization in audiovisual productions  
*Muñoz, Roberto; Recuero, Manuel*  
S.02 Tuesday 4th - 10:00 - Room L-402

- PPA-03-005. Audiovisual interactions in the perception of space and time  
*Alais, David; Burr, David, Carlile, Simon*  
S.02 Tuesday 4th - 10:20 - Room L-402
- PPA-03-006. Synchronization between Auditory and Visual Stimuli: The Effect of Distance from Observers to an Object  
*Kohei Washikita; Takuya Takahashi; Masashi Yamada*  
S.02 Tuesday 4th - 10:40 - Room L-402
- PPA-03-007-IP. A systematic influence of stimulus type on audio-visual synchrony perception  
*Kohlrausch, Armin ; van Eijk, Rob L.J.; van de Par, Steven; Juola, James F.*  
S.02 Tuesday 4th - 11:00 - Room L-402
- PPA-03-008-IP. Auditory-visual speech perception and intermodal asynchrony  
*Tanaka, Akihiro; Sakamoto, Shuichi; Suzuki, Yô-iti; Tsumura, Komi*  
S.02 Tuesday 4th - 11:20 - Room L-402
- PPA-03-009. Asynchrony perception in audiovisual productions  
*Muñoz, Roberto; Recuero, Manuel; San Martín, Gonzalo; Fuenzalida, Francisco*  
S.02 Tuesday 4th - 11:40 - Room L-402
- PPA-03-010-IP. Mid-level, feature based processing for audio-visual temporal synchrony perception  
*Fujisaki, Waka; Nishida, Shin'ya*  
S.03 Tuesday 4th - 15:00 - Room L-402
- PPA-03-011-IP. Audio-visual interactions in dynamic scenes: implications for multisensory compression  
*Väljamäe, Aleksander; Soto-Faraco, Salvador*  
S.03 Tuesday 4th - 15:20 - Room L-402
- PPA-03-012-IP. Ambiguity solving in visual event perception by auditory signals  
*Watanabe, Katsumi*  
S.03 Tuesday 4th - 15:40 - Room L-402
- PPA-03-013-IP. Subjective congruence between motion picture and sound  
*Iwamiya, Shin-ichiro*  
S.03 Tuesday 4th - 16:00 - Room L-402
- PPA-03-014. Multimodal approach of vibro-acoustic comfort in vehicles: Influence of visual context  
*Amari, Maël; Parizet, Etienne; Roussarie, Vincent*  
S.03 Tuesday 4th - 16:20 - Room L-402
- PPA-03-015. Crossmodal binding: evaluating the 'unity assumption' using complex audiovisual stimuli  
*Vatakis, Argiro; Spence, Charles*  
Poster - Wenesday 5th afternoon - Board 05
- PPA-04 – Audition of the sound source and its properties**  
*Session Organizer: Anna Preis*
- PPA-04-001-IP. Perceiving looming sounds: the importance of auditory motion as a sound source property  
*Neuhoff, John, G.*  
S.01 Monday 3rd - 15:00 - Room L-402
- PPA-04-002-IP. Road-vehicle simulation for psychoacoustic studies  
*Kaczmarek, Tomasz*  
S.01 Monday 3rd - 15:20 - Room L-402
- PPA-04-003. Voice categorization using free sorting tasks  
*Guastavino, Catherine; Belin, Pascal*  
S.01 Monday 3rd - 15:40 - Room L-402
- PPA-04-004. Effect of duration in the perception of pleasantness of sound  
*Miralles, José Luis; Garrigues, José Vicente; Giménez, Alicia; Romero, José; Cibrián, Rosa; Cerdá, Salvador*  
S.01 Monday 3rd - 16:00 - Room L-402

- PPA-04-005. Altering Cue Use in Complex Auditory Decision Tasks  
*Flint, Jesse; Pastore, Richard*  
**S.01 Monday 3rd - 16:20 - Room L-402**
- PPA-04-006. Absolute threshold of hearing change by perceiving various previous sounds  
*Hasegawa, Hiroshi; Yoshida, Junji; Masao, Kasuga*  
**Poster - Wenesday 5th afternoon - Board 06**
- PPA-04-007. Application of the Geddes-Lee model for the subjective evaluation of sound emitted by loudspeakers  
*Cruañes Català, Joan; Francés Monllor, Jorge; Ramis Soriano, Jaime; Alba Fernández, Jesús*  
**Poster - Wenesday 5th afternoon - Board 07**
- PPA-05 – Binaural hearing and spatial perception**  
*Session Organizer: Jonas Braasch*
- PPA-05-001-IP. Modeling the precedence effect for percussive sounds with different attack transients  
*Jonas Braasch, Hari V. Savitala, Jens Blauert*  
**S.06 Thursday 6th - 09:40 - Room L-401**
- PPA-05-002-IP. Spatial effects on speech intelligibility  
*Colburn, H. Steven; Carr, Suzanne; Wan, Rui*  
**S.06 Thursday 6th - 10:00 - Room L-401**
- PPA-05-003-IP. A model of the head-related transfer function based on spectral cues  
*Iida, Kazuhiro; Itoh, Motokuni; Itagaki, Atsue; Morimoto, Masayuki*  
**S.06 Thursday 6th - 10:20 - Room L-401**
- PPA-05-004-IP. A closer look at the representation of interaural differences in a binaural model  
*Nicolas Le Goff; Armin Kohlrausch; Jeroen Breebaart*  
**S.06 Thursday 6th - 10:40 - Room L-401**
- PPA-05-005-IP. The duplex-theory of localization investigated under natural conditions  
*Seeber, Bernhard U.*  
**S.06 Thursday 6th - 11:00 - Room L-401**
- PPA-05-006-IP. Lead-lag precedence paradigm as a function of relative level and number of lag stimuli  
*Yost, William A.*  
**S.06 Thursday 6th - 11:20 - Room L-401**
- PPA-05-007. Perceptual Movement of Sounds Fed through Multiway Loudspeakers Set Up Perpendicularly  
*Agatsuma, Yu; Miyasaka, Eiichi*  
**S.06 Thursday 6th - 11:40 - Room L-401**
- PPA-05-008. Perceptual distances from sound sources in the case of wearing hearing aids in a live sound space  
*Arai, Yasuhiko; Murashita, Shota*  
**S.07 Thursday 6th - 15:00 - Room L-401**
- PPA-05-009. Computational Count-comparison models for ITD and ILD decoding  
*Pulkki, Ville; Hirvonen, Toni*  
**S.07 Thursday 6th - 15:20 - Room L-401**
- PPA-05-010. A comparison of detection and lateralization of interaurally time-delayed signals in the presence of diotic masking noise  
*Van de Par, Steven; Kohlrausch, Armin; Schimmel, Othmar*  
**S.07 Thursday 6th - 15:40 - Room L-401**
- PPA-05-011. Comodulation masking release and interaural phases differences  
*Verhey, Jesko L.; Epp, Bastian*  
**S.07 Thursday 6th - 16:00 - Room L-401**
- PPA-05-012. Binaural sound localisation by level distributions  
*Heavens, David; Pearce, Tim*  
**Poster - Wenesday 5th afternoon - Board 08**

- PPA-05-013. Sound localization with scaled dummy-heads on a TeleHead  
*Tatsuya Hirahara; Hiroyuki Sagara; Makoto Otani*  
Poster - Wednesday 5th afternoon - Board 09
- PPA-05-014. Experiments on the utilization of space as a musical language resource  
*Miralles Bono, José Luis; Payri, Blas; Redondo, Javier; Picó, Rubén*  
Poster - Wednesday 5th afternoon - Board 10
- PPA-05-015. Perceptual evaluation of HRTF notches versus peaks for vertical localisation  
*Greff, Raphaël; Katz, Brian F.G.*  
Poster - Wednesday 5th afternoon - Board 11
- PPA-05-016. Lateralization of amplitude-modulated bone-conducted ultrasounds: discrimination of interaural time and intensity differences and time-intensity trading  
*Hotehama, Takuya; Nakagawa, Seiji*  
Poster - Wednesday 5th afternoon - Board 12
- PPA-05-017. Numerical study on source distance dependency of head-related transfer functions  
*Otani, Makoto; Hirahara, Tatsuya*  
Poster - Wednesday 5th afternoon - Board 13

#### PPA-06 – Binaural technology

*Session Organizers: Michael Vorländer; Brian Katz*

- PPA-06-001-IP. Implementation and evaluation of a measurement procedure for the acoustical transfer impedance of ear simulators  
*Fedtke, Thomas*  
S.07 Thursday 6th - 16:20 - Room L-401
- PPA-06-002-IP. Ear Canal Impedances of Children and Adults - Investigations with Simulation and Measurements  
*Fels, Janina; Paprotny, Jan; Feickert, Lars*  
S.07 Thursday 6th - 16:40 - Room L-401
- PPA-06-003-IP. The sound field in an ear canal occluded by a hearing aid  
*Stinson, Michael R.; Daigle, Gilles A.*  
S.07 Thursday 6th - 17:00 - Room L-401
- PPA-06-004-IP. Manikin for assessment of Mp3 player exposure  
*Hammershøi, Dorte*  
S.07 Thursday 6th - 17:20 - Room L-401
- PPA-06-005-IP. A fast measurement system for the listener's own head-related impulse responses  
*Fukudome, Kimitoshi; Takenouchi Kazuki; Kashida Masato; Samejima, Toshiya; Ono, Naoki*  
S.07 Thursday 6th - 17:40 - Room L-401
- PPA-06-006-IP. Simulating distance cues in virtual reverberant environments  
*Norbert Kopco, Scott Santarelli, Virginia Best, Barbara Shinn-Cunningham*  
S.08 Friday 7th - 09:00 - Room L-401
- PPA-06-007-IP. High Fidelity Modeling And Experimental Evaluation Of Binaural Bone Conduction Communication Devices  
*Walker, B. N.; Stanley, R. M.; Przekwas, A.; Tan, X.G.; Chen, Z.J.; Yang, H.W. Wilkerson, P.; Harrand, V.; Chancey, C.; Houtsma, A.J.M.*  
S.08 Friday 7th - 09:20 - Room L-401
- PPA-06-008-IP. Applications of binaural processing to automatic speech recognition  
*Richard M. Stern, Evandro Gouvea, Hyung-Min Park, Govindarajan Thattai*  
S.08 Friday 7th - 09:40 - Room L-401
- PPA-06-009-IP. Round robin comparison of HRTF measurement systems: Preliminary results  
*Katz, Brian F.G.; Begault, Durand R.*  
S.08 Friday 7th - 10:00 - Room L-401

- PPA-06-010-IP. Do we need new artificial heads?  
*Genuit, Klaus, Fiebig, André*  
**S.08 Friday 7th - 10:20 - Room L-401**
- PPA-06-011. Development of selectable viewpoint and listening point system for musical performance  
*Kenta Niwa; Takanori Nishino; Kazuya Takeda*  
**Poster - Wenesday 5th afternoon - Board 14**
- PPA-07 – Computational models of the auditory system**  
*Session Organizer: Enrique López-Poveda*
- PPA-07-001. Fluid motion in the Organ of Corti  
*Baumgart, Johannes; Grundmann, Roger*  
**S.01 Monday 3rd - 15:00 - Room L-401**
- PPA-07-002. Simulating cochlear frequency selectivity: the Trnl filter  
*López-Nájera, Alberto; Meddis, Ray; López-Poveda, Enrique Alejandro*  
**S.01 Monday 3rd - 15:20 - Room L-401**
- PPA-07-003-IP. A computational auditory model with a nonlinear cochlea and acoustic scale normalization  
*Irino, Toshio; Walters, Tom C.; Patterson, Roy D.*  
**S.01 Monday 3rd - 15:40 - Room L-401**
- PPA-07-004-IP. Computational modelling of the cat auditory periphery: recent developments and future directions  
*Bruce, Ian C.; Zilany, Muhammad S. A.*  
**S.01 Monday 3rd - 16:00 - Room L-401**
- PPA-07-005-IP. Computational models of brainstem neurons  
*Colburn, H. Steven; Zhou, Yi; Brughera, Andrew; Chung, Yoojin*  
**S.01 Monday 3rd - 16:20 - Room L-401**
- PPA-07-006-IP. The representation of high-frequency spectral notches in the peripheral auditory system: a computational model study  
*Lopez-Poveda, Enrique A.; Alves-Pinto, Ana; Palmer, Alan R.; Eustaquio-Martín, A.*  
**S.01 Monday 3rd - 16:40 - Room L-401**
- PPA-07-007-IP. Absolute sensory threshold: a mathematical model  
*Lecluyse, Wendy; Meddis, Ray*  
**S.01 Monday 3rd - 17:00 - Room L-401**
- PPA-07-008-IP. The temporal window model and the linearity of temporal summation  
*Plack, Christopher J.*  
**S.01 Monday 3rd - 17:20 - Room L-401**
- PPA-07-009-IP. Modeling spectral and temporal masking in the human auditory system  
*Dau, Torsten; Jepsen, Morten L.; Ewert, Stephan D.*  
**S.01 Monday 3rd - 17:40 - Room L-401**
- PPA-07-010-IP. Quantifying pitch perception: Models and mysteries  
*Oxenham, Andrew J.; Micheyl, C.; Bernstein, Joshua G.; Simonson, Andrea M.*  
**S.02 Tuesday 4th - 09:00 - Room L-401**
- PPA-07-011-IP. The robustness of bio-acoustic communication and the role of normalization  
*Patterson, Roy D.; van Dinther, Ralph; Irino, Toshio*  
**S.02 Tuesday 4th - 09:20 - Room L-401**
- PPA-07-012-IP. Models of timbre using spectro-temporal receptive fields: investigations of coding strategies  
*Pressnitzer, Daniel; Elhilali, Mounya; Shihab Shamma*  
**S.02 Tuesday 4th - 09:40 - Room L-401**
- PPA-07-013-IP. Sparse time-frequency representations in auditory processing  
*Denham, Susan; Coath, Martin; Balaguer-Ballester, Emili*  
**S.02 Tuesday 4th - 10:00 - Room L-401**

- PPA-07-014. Auditory processing of spectral modulations produced by early reflections  
*Buchholz, Jörg Matthias*  
S.02 Tuesday 4th - 10:20 - Room L-401
- PPA-07-015. Evaluation of Interaural Time and Intensity Differences: A Neural Model  
*Bures, Zbynek*  
S.02 Tuesday 4th - 10:40 - Room L-401
- PPA-07-016. Processing capacity for perceptual information in Gaussian noise tokens  
*Tom Goossens, Steven van de Par, Armin Kohlrausch*  
S.02 Tuesday 4th - 11:00 - Room L-401
- PPA-07-017-IP. A cortical view on auditory scene analysis: a physiological & computational approach  
*Elhilali, Mounya; Shamma, Shihab*  
S.02 Tuesday 4th - 11:20 - Room L-401
- PPA-07-018. Comparative evaluation of successive cochlear modeling stages as possible front-ends for automatic speech recognition  
*Harczos, Tamás; Nogueira, Waldo; Szepannek, Gero; Klefenz, Frank*  
Poster - Wenesday 5th afternoon - Board 15
- PPA-08 – Virtual and real auditory environments-auditory display**  
*Session Organizers: Barbara Shinn-Cunningham; Gin Best*
- PPA-08-001-IP. The plastic ear: Coping with a life time of change  
*Simon Carlile, Toby Blackman, Joel Cooper*  
S.03 Tuesday 4th - 16:40 - Room L-402
- PPA-08-002-IP. Challenges in the auditory display of distance information  
*Zahorik, Pavel*  
S.03 Tuesday 4th - 17:70 - Room L-402
- PPA-08-003-IP. Divided listening in auditory displays  
*Best, Virginia; Ihlefeld, Antje; Mason, Christine; Kidd, Gerald Jr; Shinn-Cunningham, Barbara*  
S.03 Tuesday 4th - 17:20 - Room L-402
- PPA-08-004-IP. Modelling Processes Underlying Change Deafness  
*Martin, Russell; McAnally, Ken; Eramudugolla, Ranmalee; Irvine, Dexter; Mattingley, Jason*  
S.03 Tuesday 4th - 17:40 - Room L-402
- PPA-08-005-IP. Maximizing information transfer in auditory speech displays  
*Brungart, Douglas S.; Simpson, Brian D., Iyer, Nandini*  
S.04 Wednesday 5th - 09:00 - Room L-402
- PPA-08-006-IP. Auditory information, hearing loss and hearing aids  
*Naylor, Graham*  
S.04 Wednesday 5th - 09:20 - Room L-402
- PPA-08-007-IP. Impact of hearing impairment and hearing aids on benefits due to binaural hearing  
*Kalluri, Sridhar; Edwards, Brent*  
S.04 Wednesday 5th - 09:40 - Room L-402
- PPA-08-008-IP. Displaying auditory information in cochlear implants: Insights from simulations in normal hearing  
*Oxenham, Andrew J.; Simonson, Andrea M.*  
S.04 Wednesday 5th - 10:00 - Room L-402
- PPA-08-009-IP. Auditory Streaming in data sonification  
*Barrass, Stephen*  
S.04 Wednesday 5th - 10:20 - Room L-402
- PPA-08-010. Effects of auditory context on the identification of environmental sounds  
*Gygi, Brian; Shafiro, Valeriy*  
S.04 Wednesday 5th - 10:40 - Room L-402

- PPA-08-011. Virtual Audio Reproduced in a Headrest  
*M.Jones, S.J.Elliott, T.Takeuchi, J.Beer*  
Poster - Wenesday 5th afternoon - Board 16
- PPA-08-012. On the improvement of virtual localization in vertical directions using HRTF synthesis and additional filtering  
*Wersényi, György*  
Poster - Wenesday 5th afternoon - Board 17
- PPA-09 – PPA-General**
- PPA-09-001. Psychosocial variables in a hearing conservation program addressed to the young  
*Biassoni, Ester C.; Serra, Mario R.; Bie, Zulema; Layum, Yamila; Díaz, Mildred; Almada, Natalia; Joeques, Silvia; Yacci, María R.*  
S.04 Wednesday 5th - 11:20 - Room L-402
- PPA-09-002. Acoustic impedances of ear canals measured by impedance tube  
*Ciric, Dejan; Hammershøi, Dorte*  
S.05 Wednesday 5th - 16:20 - Room L-402
- PPA-09-003. Bad vibes: an investigation into the worst sounds in the world  
*Cox, Trevor J.*  
S.04 Wednesday 5th - 11:40 - Room L-402
- PPA-09-004. Preliminary analysis of community response to road traffic noise in Moroccan cities  
*M.Garoum, W.Kharbaoui, A.Bahoussa, M.Rhachi, A.Moreno*  
S.05 Wednesday 5th - 15:00 - Room L-402
- PPA-09-005. Effect of binaural dichotic presentation with critical bandwidth based comb filters on source localization  
*Kulkarni, Pandurangarao N.; Pandey, Prem C.*  
S.05 Wednesday 5th - 15:20 - Room L-402
- PPA-09-006. Modulation masking for maskers of different statistical and spectral properties  
*Kutzner, Dariusz Jan*  
S.05 Wednesday 5th - 15:40 - Room L-402
- PPA-09-007. Defining the limits of tuning for tones with and without vibrato  
*van Besouw, Rachel; Brereton, Jude; Howard, David*  
S.05 Wednesday 5th - 16:00 - Room L-402
- PPA-09-008. Non-occupational noise exposure in the young: Development of a hearing conservation program  
*Serra, Mario R.; Biassoni, Ester C.; Pavlik, Marta; Pérez Villalobo, Jorge; Curet, Carlos; Hinalaf, María; Joeques, Silvia; Yacci, María R.; Minoldo, Gloria; Abraham, Silvia*  
S.04 Wednesday 5th - 11:00 - Room L-402
- PPA-09-009. Cochlear nonlinearity and transient evoked otoacoustic emission latency  
*Sisto, Renata; Moleti, Arturo; Tirabasso, Angelo*  
S.05 Wednesday 5th - 16:40 - Room L-402
- PPA-09-010. Judging sex and age: Effect of glottal-pulse rate, vocal-tract length and original talker  
*Smith, David R. R.; Walters, Thomas C.; Patterson, Roy D.*  
S.05 Wednesday 5th - 17:00 - Room L-402
- PPA-09-011. Individual differences of electroencephalogram under sound stimuli  
*Yamada Yukiko, Tsujimura Sohei*  
S.05 Wednesday 5th - 17:20 - Room L-402
- PPA-09-012. Auditory evoked magnetic fields and loudness in relation to bandpass noises  
*Yoshiharu Soeta; Seiji Nakagawa*  
S.05 Wednesday 5th - 17:40 - Room L-402

- PPA-09-013. Quantitative evaluation on subjective impression of sonority of chords containing tension notes  
*Inoue, Hiroki; Emura, Norio; Miura, Masanobu; Yanagida, Masuzo*  
Poster - Wednesday 5th afternoon - Board 18
- PPA-09-014. Perception of bone-conducted ultrasound assessed by its loudness characteristics  
*Ito, Kazuhito; Nakagawa, Seiji*  
Poster - Wednesday 5th afternoon - Board 19
- PPA-09-015. Effects of mood on musical preference: Experiments and research on everyday listening to music  
*Junko, Matsumoto*  
Poster - Wednesday 5th afternoon - Board 20
- PPA-09-016. The nonlinear component 2f1-f2 and the pitch of two-component complexes  
*Mielczarek, Adam*  
Poster - Wednesday 5th afternoon - Board 21

### **RBA- Room and Building Acoustics**

#### **RBA-01 – Acoustics and sustainable building**

*Session Organizer: Murray Hodgson*

- RBA-01-001-IP. Sustainable Building Approach in Spain: Present and Future  
*Serra, Javier;*  
S.03 Tuesday 4th - 15:00 - Room L-102
- RBA-01-002-IP. Acoustics and the UK's approach: Towards sustainable acoustics  
*Rogers, Peter*  
S.03 Tuesday 4th - 15:20 - Room L-102
- RBA-01-003. Sustainability, Acoustics and Green Building Rating Systems; or: How to Not Get Locked Out of Sustainable Design  
*Kurtz, Alexis*  
S.03 Tuesday 4th - 15:40 - Room L-102
- RBA-01-004-IP. Acoustic Design for Green Buildings  
*Roy, Kenneth, Snader, Anita*  
S.03 Tuesday 4th - 16:00 - Room L-102
- RBA-01-005-IP. Analysis of the sustainability performance of various residential building designs with similar acoustic characteristics  
*Yu, Chia-Jen; Kang, Jian*  
S.03 Tuesday 4th - 16:20 - Room L-102
- RBA-01-006-IP. Acoustical evaluation of six 'green' office buildings  
*Hodgson, Murray; Hyde, Rosamund; Fulton, Blair; Taylor-Hell, Catherine*  
S.03 Tuesday 4th - 16:40 - Room L-102
- RBA-01-007-IP. Field measurement of the acoustical performance of green roofs  
*Connelly, Maureen; Khaleghi, Alireza; Hodgson, Murray*  
S.03 Tuesday 4th - 17:00 - Room L-102
- RBA-01-008-IP. Green and sustainable materials for noise control  
*Asdrubali, Francesco*  
S.03 Tuesday 4th - 17:20 - Room L-102
- RBA-01-009-IP. An experimental investigation of the potential of biomass materials as porous sound absorbers  
*RD Cookson, DJ Oldham, CA Egan, G Seiffert*  
S.03 Tuesday 4th - 17:40 - Room L-102
- RBA-01-010-IP. Vibro-acoustic properties of porous media from recycled granulates  
*Khan, Horoshenkov, Benkreira, Patel*  
S.04 Wednesday 5th - 09:00 - Room L-102



- RBA-01-011-IP. The development of techniques for assessing the combined acoustic and airflow performance of natural ventilation strategies  
*D. J. Oldham, M. H. de Salis, S. Sharples*  
S.04 Wednesday 5th - 09:20 - Room L-102
- RBA-01-012-IP. Relationship between ventilation, air quality and acoustics in 'green' and 'brown' buildings  
*Khaleghi, Alireza; Bartlett, Karen; Hodgson, Murray*  
S.04 Wednesday 5th - 09:40 - Room L-102
- RBA-01-013-IP. Improving the Acoustical Performance of a Green Office Building  
*Max Richter; Zohreh Razavi; Catherine Taylor-Hell; Murray Hodgson; Alireza Khaleghi*  
S.04 Wednesday 5th - 10:00 - Room L-102
- RBA-01-014. Sound reduction of vacuum insulation based on building panels  
*Hans Cauberg; Martin Tenpierik*  
S.04 Wednesday 5th - 10:20 - Room L-102
- RBA-01-015. Pilot Project about the Implementation of Acoustics Improvements for Fulfilling the CTE in Subsidized Dwellings in Spain  
*Fuente, Marta; Fernández, Fernando; Herranz, Karmele*  
S.04 Wednesday 5th - 10:40 - Room L-102
- RBA-01-016. Inverse estimation of non acoustical parameters of absorbing materials using genetic algorithms  
*M. Garoum, M. Tajayouti, M. Rhachi, F. Simón, A. Moreno*  
S.04 Wednesday 5th - 11:00 - Room L-102
- RBA-01-017. Acoubat-dbmat: The importance of acoustic modelling of buildings in the "Codigo Tecnico de la Edificacion" regulatory framework  
*Portas, Iván*  
S.04 Wednesday 5th - 11:20 - Room L-102
- RBA-01-018. Absorption of open ceilings  
*Vercammen, Martijn, Scheers, Theo*  
S.04 Wednesday 5th - 11:40 - Room L-102
- RBA-01-019. Prediction of Internal Acoustic Conditions in Shopping Centres  
*Calejo Rodrigues, Rui; Silva, Eduarda; Ferreira, Tiago*  
Poster - Wednesday 5th afternoon - Board 22
- RBA-01-020. The acoustical potential of reed panels for partitions in sustainable construction  
*Jiménez, Montaña; Díaz, César; Oldham, David; Fernández-Cabo, José; Pedrero, Antonio; Torres, Luis*  
Poster - Wednesday 5th afternoon - Board 23
- RBA-02 – Acoustics of ancient theatres: their use for acoustical performances**  
*Session Organizer: Roberto Pompoli*
- RBA-02-001-IP. The acoustics of the Hellenistic Theatre of Epidaurus: The important role of the seat rows  
*Nico F. Declercq, Cindy S. A. Dekeyser*  
S.01 Monday 3rd - 15:00 - Room L-101
- RBA-02-002-IP. Acoustics as a tool to support the archaeological reconstruction of ancient theatres: The case study of Ostia Antica  
*Gugliermetti, Franco; Bisegna, Fabio, Monaco, Andrea*  
S.01 Monday 3rd - 15:20 - Room L-101
- RBA-02-003-IP. The acoustics of two ancient roman theatres in Pompeii  
*Dragonetti, Raffaele; Ianniello, Carmine; Mercogliano, Francesco; Romano, Rosario*  
S.01 Monday 3rd - 15:40 - Room L-101

- RBA-02-004-IP. Is scenery important for ancient drama?  
*Chourmouziadou, Kalliopi; Kang, Jian*  
**S.01 Monday 3rd - 16:00 - Room L-101**
- RBA-02-005-IP. The modern use for acoustical performances of the ancient roman Theatre of Beneventum  
*De Gregorio Leda; Iannace Gino; Maffei Luigi; Masullo Massimiliano*  
**S.01 Monday 3rd - 16:20 - Room L-101**
- RBA-02-006-IP. Types of ancient theatres and their acoustical characteristics  
*Rindel, Jens Holger*  
**S.01 Monday 3rd - 16:40 - Room L-101**
- RBA-02-007. Study of the italian style theatre ´s acoustic performance throughout the research job carried out in the " Teatro Principal" of Valencia  
*Barba Sevillano, Arturo; Giménez Pérez, Alicia; Cibrián Ortiz de Anda, Rosa Mª; Cerdá Jordá, Salvador; Romero Faus, José; Lacatis, Radu George*  
**S.01 Monday 3rd - 17:00 - Room L-101**
- RBA-02-008-IP. Acoustical measurements in the ancient theatre of Segesta  
*Farnetani, Andrea; Prodi, Nicola; Pompoli, Roberto*  
**S.01 Monday 3rd - 17:20 - Room L-101**
- RBA-02-009-IP. Acoustic phenomena in archaeological zones in Mexico  
*Cruz Calleja, Jorge Antonio*  
**S.01 Monday 3rd - 17:40 - Room L-101**
- RBA-02-010. Sound characteristics in small historical mediterranean theatres  
*Tronchin, Lamberto; Durvilli, Ilaria; Tarabusi, Valerio.*  
**Poster - Wenesday 5th afternoon - Board 24**
- RBA-03 – Airborne sound insulation**  
*Session Organizer: Trevor Nightingale*
- RBA-03-001-IP. Validity of calculation methods for sound transmission through wall panels  
*Mahavir, Singh; Omkar, Sharma; Vellur, Mohanan*  
**S.05 Wednesday 5th - 16:40 - Room L-103**
- RBA-03-002. Comparison of airborne sound insulation field measurements with the predictive model in EN 12354-1: 2000  
*Cramond, Daniel; Kang, Jian, Sharples, Steve*  
**S.05 Wednesday 5th - 17:00 - Room L-103**
- RBA-03-003. Efficient acoustic wall backings based on thin hollow brick plates  
*Moreno, Antonio; Simón, Francisco; de la Colina, Carlos; Fernández, María José*  
**S.05 Wednesday 5th - 17:20 - Room L-103**
- RBA-03-004. Estimation method for parameters of construction on predicting transmission loss of double leaf dry partition  
*Nakanishi, Shinsuke; Yairi, Motoki; Minemura, Atsuo*  
**S.05 Wednesday 5th - 17:40 - Room L-103**
- RBA-03-005. Numerical analysis of outdoor noise reduction due to building balconies  
*Yasuda, Yosuke; Gohara, Shigetoshi; Sakuma, Tetsuya; Sakamoto, Shinichi*  
**S.01 Monday 3rd - 17:00 - Room L-102**
- RBA-03-006. Airborne sound insulation of windows with built-on shutter and prefabricated box  
*Díaz, César; Pedrero, Antonio; Navacerrada, Mª Ángeles*  
**Poster - Wenesday 5th afternoon - Board 25**
- RBA-03-007. About the influence of the polymeric interlayer shear modulus in the laminated glass panels transmission loss  
*Tomás Baenas, Jenaro Vera, Jesús Alba, Jaime Ramis*  
**Poster - Wenesday 5th afternoon - Board 26**

- RBA-03-008. Prediction models of airborne sound insulation  
*Alba, Jesús; Marant, Vincent; Aguilera, Juan Luis; Ramis, Jaime*  
Poster - Wenesday 5th afternoon - Board 27
- RBA-03-009. Correlation of thermal and acoustics features in elements of façade of buildings situated in mediterranean climate.  
*Meza, Leonardo; Recuero, Manuel*  
Poster - Wenesday 5th afternoon - Board 28
- RBA-03-010. Effect of facade shape for the acoustic protection of buildings  
*Busa, Lucia; Secchi, Simone*  
Poster - Wenesday 5th afternoon - Board 29
- RBA-04 – Class room acoustics**  
*Session Organizers: Louis Sutherland; David Lubman*
- RBA-04-001-IP. Classroom acoustics for the 21st century  
*Lubman, David; Sutherland, Louis C.*  
S.05 Wednesday 5th - 15:00 - Room L-102
- RBA-04-002-IP. Ranch study - Implications for clasroom acoustics  
*Stansfeld, Stephen; Clark, Charlotte*  
S.05 Wednesday 5th - 15:20 - Room L-102
- RBA-04-003-IP. "Modern Teaching" Needs Modern Conditions - Room Acoustics as an Ergonomic Factor  
*Oberdörster, Markus; Tiesler, Gerhart*  
S.05 Wednesday 5th - 15:40 - Room L-102
- RBA-04-004-IP. Noise - A Stressor? Acoustic Ergonomics Of Schools  
*Tiesler, Gerhart; Oberdörster, Markus*  
S.05 Wednesday 5th - 16:00 - Room L-102
- RBA-04-005-IP. Measurement of teacher's voice levels in primary school classrooms  
*Shield, Bridget, Anne Carey*  
S.05 Wednesday 5th - 16:20 - Room L-102
- RBA-04-006-IP. Classroom Acoustics - Reverberation and the Cafe Effect... is the Lombard Effect the key?  
*Whitlock, James A. T.; Dodd, George*  
S.05 Wednesday 5th - 16:40 - Room L-102
- RBA-04-007-IP. Localizing the Teacher in the Virtual Classroom  
*Rychtáriková, Monika, Fels, Janina, Vermeir, Gerrit, Wouters Jan, Vorländer Michael*  
S.05 Wednesday 5th - 17:00 - Room L-102
- RBA-04-008-IP. Minimal classroom requirements for optimal acoustic access to speech by children with and without hearing loss  
*Iglehart, Frank*  
S.05 Wednesday 5th - 17:20 - Room L-102
- RBA-04-009-IP. Extreme acoustics in extreme learning conditions: An open plan hospital school  
*Greenland, Emma; Shield, Bridget*  
S.05 Wednesday 5th - 14:40 - Room L-102
- RBA-04-010-IP. Ceiling baffles and reflectors for controlling lecture-room sound for speech intelligibility  
*Hodgson, Murray; Yang, Wonyoung*  
S.06 Thursday 6th - 09:00 - Room L-102
- RBA-04-011. Effects of sound diffusers and panel absorbers on the sound clarity in classrooms  
*Sang-bong Shin; Chan-hoon Haan*  
S.06 Thursday 6th - 09:20 - Room L-102

- RBA-04-012. Optimal reverberation time for speech intelligibility for normal and hearing-impaired listeners using auralization  
*Yang, Wonyoung; Hodgson, Murray*  
S.06 Thursday 6th - 09:40 - Room L-102
- RBA-04-013. A study of improving speech intelligibility in classrooms  
*Han, Ning; Mak, Cheuk Ming; Qiu, Xiaojun*  
S.06 Thursday 6th - 10:00 - Room L-102
- RBA-04-014. Speech Intelligibility in a refurbished classroom  
*Lisa, Martin; Nickel, Jürgen; Becker, Bernhard*  
S.06 Thursday 6th - 10:20 - Room L-102
- RBA-05 – Computational methods for room acoustics**  
*Session Organizers: Paul Calamia; Peter Svensson*
- RBA-05-001-IP. Acoustical Modeling with Sonel Mapping  
*Kapralos, Bill; Jenkin, Michael; Miliotis, Evangelos*  
S.06 Thursday 6th - 09:00 - Room L-101
- RBA-05-002-IP. Simulation, visualization, and virtual reality based modeling of room acoustics  
*Deines, Eduard; Michel, Frank; Hering-Bertram, Martin; Moring, Jan; Hagen, Hans*  
S.06 Thursday 6th - 09:20 - Room L-101
- RBA-05-003-IP. Hybrid method for room acoustic simulation in real-time  
*Schröder, Dirk; Vorländer, Michael*  
S.06 Thursday 6th - 09:40 - Room L-101
- RBA-05-004-IP. An improved energetic approach to diffraction based on the uncertainty principle  
*Stephenson, Uwe M.; Svensson, U. Peter*  
S.06 Thursday 6th - 10:00 - Room L-101
- RBA-05-005-IP. Extending geometrical acoustics to highly detailed architectural environments  
*Tsingos, Nicolas; Lefebvre, Sylvain; Dachsbacher, Carsten; Dellepiane, Matteo*  
S.06 Thursday 6th - 10:20 - Room L-101
- RBA-05-006-IP. Investigation on higher orders of spherical harmonics equations for efficient room-acoustic predictions  
*Jing, Yun; Xiang, Ning*  
S.06 Thursday 6th - 10:40 - Room L-101
- RBA-05-007-IP. Computation of reverberation time in large atrium spaces  
*Yap, Pau Ling; Meng, Yan; Kang, Jian*  
S.06 Thursday 6th - 11:00 - Room L-101
- RBA-05-008-IP. Acoustic Radiance Transfer Method  
*Siltanen, Samuel; Lokki, Tapio; Savioja, Lauri*  
S.06 Thursday 6th - 11:20 - Room L-101
- RBA-05-009-IP. Applications of large-scale finite element sound field analysis onto room acoustics  
*Otsuru, Toru; Okamoto, Noriko; Okuzono, Takeshi; Sueyoshi, Toshihide*  
S.06 Thursday 6th - 11:40 - Room L-101
- RBA-05-010-IP. Steady-State and Time-Decaying Sound Fields in Enclosures Using Energy-Intensity Boundary Elements with Time Delay Analysis and Absorption Scaling  
*Bliss, Donald; Franzoni, Linda; Michalis, Krista*  
S.07 Thursday 6th - 15:00 - Room L-101
- RBA-05-011-IP. Treatment of absorbing boundary condition for FDTD analysis on room acoustics  
*Shinichi Sakamoto; Hiroshi Nagatomo; Takumi Asakura*  
S.07 Thursday 6th - 15:20 - Room L-101

- RBA-05-012. High frequency acoustic simulations via FMM accelerated BEM  
*Gumerov, Nail A.; Duraiswami, Ramani;*  
**S.07 Thursday 6th - 15:40 - Room L-101**
- RBA-05-013-IP. A prediction software interface for room acoustic optimization  
*Dalenbäck, Bengt-Inge; Svensson, U. Peter*  
**S.07 Thursday 6th - 16:00 - Room L-101**
- RBA-05-014-IP. Efficient Representation of Edge Diffraction Impulse Responses  
*Pulkki, Ville; Svensson, U. Peter; Paatero, Tuomas*  
**S.07 Thursday 6th - 16:20 - Room L-101**
- RBA-05-015-IP. Evaluating the perceptual accuracy of model-based auralization  
*Summers, Jason E.; Gaumont, Charles F.; Baer, Ralph N.; Brock, Derek*  
**S.07 Thursday 6th - 16:40 - Room L-101**
- RBA-05-016. Introduction and Applications of Phased Beam Tracing Method: Can We Interpret Low Frequency Response by the Particle Property?  
*Jeong, Cheol-Ho; Ih, Jeong-Guon*  
**S.07 Thursday 6th - 17:00 - Room L-101**
- RBA-05-017-IP. Diffusion-based models for predicting sound fields in rooms with mixed specular and diffuse reflections  
*Foy, Cédric; Billon, Alexis; Picaut, Judicaël; Valeau, Vincent; Sakout, Anas; Hodgson, Murray*  
**S.07 Thursday 6th - 17:20 - Room L-101**
- RBA-05-018-IP. Improved methods for calculating room impulse responses with ease 4.2 AURA  
*Feistel, Stefan; Ahnert, Wolfgang; Miron, Alex; Schmitz, Oliver*  
**S.07 Thursday 6th - 17:40 - Room L-101**
- RBA-05-019. A stable time domain BEM for diffuser scattering  
*Hargreaves, Jonathan A.; Cox, Trevor J.*  
**S.01 Monday 3rd - 16:40 - Room L-202**
- RBA-05-020. Prediction of sound pressure and intensity fields in rooms and near surfaces by ray tracing  
*Cousins, Owen; Hodgson, Murray; Valeau, Vincent*  
**S.01 Monday 3rd - 17:00 - Room L-202**
- RBA-05-021. Implementation and comparison of room acoustical simulation methods and an auralisation tool  
*de Avelar Gomes, Márcio H.*  
**S.01 Monday 3rd - 17:20 - Room L-202**
- RBA-05-022. Calculation of the temporal evolution of sound pressure levels in rooms  
*Cazard, Guillaume; Senat, Claude; Gamba, René*  
**Poster - Wenesday 5th afternoon - Board 30**
- RBA-05-023. Acoustic model of the pre-Romanesque church of Santa Maria de Melque  
*Díaz, César; Pedrero, Antonio; Navacerrada, M<sup>a</sup> Ángeles*  
**Poster - Wenesday 5th afternoon - Board 31**
- RBA-05-024. Generating room shapes using elliptic Fourier descriptors for geometrical acoustic simulation  
*Hoshi, Kazuma; Toshiki, Hanyu; Sekiguchi, Katsuaki*  
**Poster - Wenesday 5th afternoon - Board 32**
- RBA-06 – Concert hall acoustics**  
*Session Organizers: Takayuki Hidaka; Higini Arau*
- RBA-06-001-IP. Concert Hall Acoustics 2001-2007- Part 1  
*Beranek, Leo L.*  
**S.02 Tuesday 4th - 09:00 - Room L-101**

- RBA-06-002-IP. Concert Hall Acoustics 2001-2007- Part 2  
*Beranek, Leo L.*  
S.02 Tuesday 4th - 09:20 - Room L-101
- RBA-06-003-IP. Acoustical demands for the conductor's location  
*Meyer, Jürgen*  
S.02 Tuesday 4th - 09:40 - Room L-101
- RBA-06-004-IP. Auditory quality of performance spaces for music - the problem of the references -  
*Blauert, Jens; Jeksch, Ute*  
S.02 Tuesday 4th - 10:00 - Room L-101
- RBA-06-005-IP. Concert hall acoustics: Science versus reality  
*Commins, Daniel*  
S.02 Tuesday 4th - 10:20 - Room L-101
- RBA-06-006-IP. When is a concert hall too quiet?  
*Barron, Mike*  
S.02 Tuesday 4th - 10:40 - Room L-101
- RBA-06-007-IP. The acoustic design of the Molina de Segura theater-auditoria  
*Higini Arau-Puchades*  
S.02 Tuesday 4th - 11:00 - Room L-101
- RBA-06-008-IP. Concert Acoustics Criteria in the Frauenkirche Dresden  
*Ahnert, W.; Feistel, S.; Vorländer, M.*  
S.02 Tuesday 4th - 11:20 - Room L-101
- RBA-06-009-IP. Sound Source for the Measurement of Room Impulse Responses for Auralisation  
*Behler, Gottfried, K.*  
S.02 Tuesday 4th - 11:40 - Room L-101
- RBA-06-010-IP. Computation and Applications of Directional Echograms in Room and Concert Hall Acoustics  
*Embrechts, Jean-Jacques*  
S.03 Tuesday 4th - 15:00 - Room L-101
- RBA-06-011-IP. New method for auralizing the results of room acoustics simulations  
*Rizzi, Lorenzo; Farina, Angelo; Galaverna, Paolo; Martignon, Paolo; Conti, Lorenzo; Rosati, Andrea*  
S.03 Tuesday 4th - 15:20 - Room L-101
- RBA-06-012-IP. Coloration due to reflections, further investigations  
*Halmrast, Tor*  
S.03 Tuesday 4th - 15:40 - Room L-101
- RBA-06-013-IP. Reverberation time, mean free path and sound absorption in concert halls  
*Hidaka Takayuki, Nishihara Noriko*  
S.03 Tuesday 4th - 16:00 - Room L-101
- RBA-06-014-IP. The Modelling Of Frequency Dependent Boundary Conditions In FDTD Simulation of Concert Hall Acoustics  
*Jeong, Hyok; Drumm, Ian; Horner, Brian; Lam, Yiu Wai*  
S.03 Tuesday 4th - 16:20 - Room L-101
- RBA-06-015-IP. Shoebox Concert Halls for the 21st Century  
*Orlowski, Raf*  
S.03 Tuesday 4th - 16:40 - Room L-101
- RBA-06-016-IP. The concert hall acoustic design of the Beijing National Grand Theatre of China  
*Schmich, Isabelle; Vian, Jean-Paul*  
S.03 Tuesday 4th - 17:00 - Room L-101
- RBA-06-017-IP. Effects of directivity of a sound source on speech intelligibility in the sound field  
*Daiji, Takahashi; Saori, Kuroki*  
S.03 Tuesday 4th - 17:20 - Room L-101

- RBA-06-018-IP. Acoustical Design of New Concert Hall in Mariinsky Theatre, St. Petersburg  
*Toyota, Yasuhisa; Oguchi, Keiji; Motoo, Komoda*  
S.03 Tuesday 4th - 17:40 - Room L-101
- RBA-06-019-IP. Transparent Concert Hall Acoustics  
*Van Luxemburg, Renz; Hak, C.C.J.M.; Kok, B.H.M.; Van den Braak, E.*  
S.04 Wednesday 5th - 09:00 - Room L-101
- RBA-06-020-IP. Assessment of the uncertainty in room acoustical measurements  
*McIngo B. Witew; Pascal Dietrich*  
S.04 Wednesday 5th - 09:20 - Room L-101
- RBA-06-021-IP. Bayesian analysis in characterizing sound energy decay: A quantitative theory of inference in room acoustics  
*Xiang, Ning; Goggans, Paul M.; Jasa, Tomislav*  
S.04 Wednesday 5th - 09:40 - Room L-101
- RBA-06-022-IP. Acoustical Aspects of the Sagrada Familia Church  
*Yoshikawa, Shigeru; Narita, Takafumi; Nishimoto, Yasuko*  
S.04 Wednesday 5th - 10:00 - Room L-101
- RBA-06-023. Two new solutions for adjustable acoustics in multi purpose concert halls  
*Agren, Anders*  
S.04 Wednesday 5th - 10:20 - Room L-101
- RBA-06-024. The interpretation of objective measurements on the stage by means of the correlation with subjective data  
*Astolfi, Arianna; Giovannini, Maria; Barbato, Giulio; Filippi, Marco*  
S.04 Wednesday 5th - 10:40 - Room L-101
- RBA-06-025. "Le Grand Théâtre de Provence": the Aix-en-Provence opera house acoustics  
*Commins, Daniel*  
S.04 Wednesday 5th - 11:00 - Room L-101
- RBA-06-026. Early subjective and objective studies of concert hall stage conditions for orchestral performance  
*Dammerud, Jens Jørgen, Barron, Mike*  
S.04 Wednesday 5th - 11:20 - Room L-101
- RBA-06-027. The subjective investigation of acoustic perception of musicians: a proposed method for interpretation of results  
*Genta, Gianfranco; Giovannini, Maria; Astolfi, Arianna; Barbato, Giulio*  
S.04 Wednesday 5th - 11:40 - Room L-101
- RBA-06-028. Acoustical evaluation of different acoustic conditions in the Queen's Hall – The Royal Library, Copenhagen  
*Giovannini, Maria, Gade Anders Christian*  
S.05 Wednesday 5th - 15:00 - Room L-101
- RBA-06-029. Evaluation of stage acoustics in concert halls by investigating performer's preference  
*Kim, Yong Hee; Seo, Chun Ki; Jeon, Jin Yong*  
S.05 Wednesday 5th - 15:20 - Room L-101
- RBA-06-030. Qualitative analysis of under-balcony acoustics in concert halls with multiple directional sources  
*Kwon, Youngmin; Siebein, Gary; Gold, Martin*  
S.05 Wednesday 5th - 15:40 - Room L-101
- RBA-06-031. Acoustics of the Mira Teatro of Pozuelo de Alarcón, Madrid  
*Ottobre, Daniel; Recuero, Manuel*  
S.05 Wednesday 5th - 16:00 - Room L-101
- RBA-06-032. Sound transmission between musicians in a symphony orchestra on a concert hall stage  
*Skålevik, Magne*  
S.05 Wednesday 5th - 16:20 - Room L-101

- RBA-06-033. Information transfer in auditoria  
*Summers, Jason E.*  
S.05 Wednesday 5th - 16:40 - Room L-101
- RBA-06-034. 1/16 scale model experiment for room acoustics: Physical properties and auralized sound quality  
*Tahara, Yasuhiko; Shimoda, Hidemaro*  
S.05 Wednesday 5th - 17:00 - Room L-101
- RBA-06-035. A basic study on stage acoustics for an orchestra conductor to estimate acoustic condition of audience area  
*Tokunaga, Yasunobu; Terashima, Takane*  
S.05 Wednesday 5th - 17:20 - Room L-101
- RBA-06-036. Study on non-linear system model of orchestra performance in auditorium  
*Terashima, Takane; Tokunaga, Yasunobu*  
S.05 Wednesday 5th - 17:40 - Room L-101
- RBA-06-037. Research on Ceiling of Acoustics in Concert Hall  
*Tu Mingchiu*  
Poster - Wednesday 5th afternoon - Board 33
- RBA-06-038-IP. Our experience on the subjective perception in concert halls  
*A. Giménez; R. Cibrián; J. Romero, S. Cerda, J.L. Miralles; J. Segura*  
Poster - Wednesday 5th afternoon - Board 34
- RBA-06-039. Auditory evaluation of impulse response reconstructed by correlation factor  
*Toru, Itakura; Hideo, Shibayama*  
Poster - Wednesday 5th afternoon - Board 35
- RBA-07 – Measuring methods and standards in room and building acoustics**  
*Session Organizer: Patrizio Fausti*
- RBA-07-001-IP. Measurement uncertainty of sound insulation and sound absorption  
*Izewska, Anna; Czyzewski, Kazimierz*  
S.02 Tuesday 4th - 10:20 - Room L-103
- RBA-07-002. Uncertainties investigation in field measurements of sound insulation  
*Nascimento, Ranny; Ferreira, Daiana; Nabuco, Marco*  
S.02 Tuesday 4th - 10:40 - Room L-103
- RBA-07-003. Uncertainty evaluation for airborne noise acoustic insulation measurements  
*Castillo Cid, Javier; Sobreira Seoane, Manuel A.*  
S.02 Tuesday 4th - 11:00 - Room L-103
- RBA-07-004-IP. Sound insulation of plasterboard frame walls based on the surface velocity level measurements  
*Nurzyfski, Jacek*  
S.02 Tuesday 4th - 11:20 - Room L-103
- RBA-07-005-IP. Laboratory measurements of the flanking transmission for brick wall junctions  
*Barbatesi, Luca; Semprini, Giovanni*  
S.02 Tuesday 4th - 11:40 - Room L-103
- RBA-07-006-IP. A methodology to measure the acoustic performance of access floors  
*Asdrubali, Francesco; D'Alessandro, Francesco*  
S.03 Tuesday 4th - 15:00 - Room L-103
- RBA-07-007-IP. Evaluation of compressibility and compressive behaviour of resilient materials used in floating floors according to standard en 12431  
*Schiavi, Alessandro; Alasia, Franco; Pavoni Belli, Andrea; Russo, Francesco; Corallo, Mario*  
S.03 Tuesday 4th - 15:20 - Room L-103



- RBA-07-008. On the dynamic stiffness of materials used under floating floors: Analysis of the resonant frequency dependence by excitation force amplitude using different measurement techniques  
*F. Bettarello, P. Fausti, A. Schiavi*  
S.03 Tuesday 4th - 15:40 - Room L-103
- RBA-07-009-IP. Validation of a simulation program for predicting impact noise insulation of floating floors and a new method to determine the elastic properties of resilient interlayers  
*Geebelen, Nathalie; Boeckx, Laurens; Vermeir, Gerrit; Lauriks, Walter*  
S.03 Tuesday 4th - 16:00 - Room L-103
- RBA-07-010-IP. Measuring spatial impulse responses in concert halls and opera houses employing a spherical microphone array  
*Angelo, Farina; Andrea, Capra; Lorenzo, Conti; Paolo, Martignon; Filippo Fazi*  
S.03 Tuesday 4th - 16:20 - Room L-103
- RBA-07-011. On the use of a non-environmental control room as a 5.1 surround listening room  
*Torres-Guijarro, Soledad; Pena, Antonio; Sobreira-Seoane, Manuel A.*  
S.03 Tuesday 4th - 16:40 - Room L-103
- RBA-07-012. MP3 stimuli in room acoustics  
*Hak, C.C.J.M.; Vertegaal, J.S.*  
S.03 Tuesday 4th - 17:00 - Room L-103
- RBA-07-013. Blind estimation of clarity, centre time and deulichkeit from speech and music signals  
*Kendrick, Paul; Cox, Trevor J. ; Li, Francis, F.; Zhang, Yonggang; Chambers Jonathon*  
S.03 Tuesday 4th - 17:20 - Room L-103
- RBA-07-014. The auditoriums of the Polytechnic University of Valencia like pilot halls to establish the protocol and measures in a coordinated project  
*Lacatis, Radu George; Giménez Pérez, Alicia; Romero Faus, José; Cerdá Jordá, Salvador; Navasquillo Hervás, Barba Sevillano, Arturo*  
S.03 Tuesday 4th - 17:40 - Room L-103
- RBA-07-015. Accurate Estimation of Reverberation Parameters with Natural Sound Source Stimuli  
*Li, Francis; Cox, Trevor; Kendrick, Paul; Zhang, Yonggang; Chambers, Jonathon*  
S.04 Wednesday 5th - 09:00 - Room L-103
- RBA-07-016. Acceptable temperature changes during synchronous averaging for reverberation time measuring by Swept-Sine method  
*Satoh, Fumiaki; Sano, Masato; Hayashi, Yukiteru; Sakamoto, Shinichi; Tachibana, Hideki*  
S.04 Wednesday 5th - 09:20 - Room L-103
- RBA-07-017. Continuous Reverberation time estimation applied to obtain Normalized Sound Level differences  
*Undurraga L., Jaime; Venegas C., Rodolfo*  
S.04 Wednesday 5th - 09:40 - Room L-103
- RBA-07-018. Speech Intelligibility Measurements in a Non-Diffuse Space using Open and Closed loop systems  
*Gomez, Louis; Nestoras, Christos; Dance, Stephen; Murano, Sal*  
S.04 Wednesday 5th - 01:00 - Room L-103
- RBA-07-019. Speech intelligibility measurements in a diffuse space using open and closed loop systems  
*Nestoras, Christos; Gomez, Louis; Dance, Stephen; Murano, Sal*  
S.04 Wednesday 5th - 10:20 - Room L-103
- RBA-07-020. Comparison of influence of distortion in MLS and sine sweep technique  
*Ciric, Dejan*  
S.04 Wednesday 5th - 10:40 - Room L-103
- RBA-07-021. Effect of stimulus speed error on measured room acoustic parameters  
*Hak, Constant; Hak, Jan*  
S.04 Wednesday 5th - 11:00 - Room L-103

- RBA-07-022. Diffuse sound absorption coefficient determination from in situ specific boundary impedance measurements by the sound intensity technique  
*Rolón, Sebastián; Montoya, Adrián; Pesse, Ricardo*  
S.04 Wednesday 5th - 11:20 - Room L-103
- RBA-07-023-IP. Measuring methods for the acoustical characterization of churches  
*Carbonari Antonio; Cirillo Ettore; Martellotta Francesco; Ricciardi Paola*  
S.04 Wednesday 5th - 11:40 - Room L-103
- RBA-07-024. Evaluation of objective and subjective acoustic parameters of the Cathedral in Santiago, Chile  
*Nicolás Bravo, Felipe Contreras, María José Marsano*  
S.05 Wednesday 5th - 15:00 - Room L-103
- RBA-07-025. On the spatial variation of acoustical parameters in churches  
*Cirillo Ettore, Martellotta Francesco*  
S.05 Wednesday 5th - 15:20 - Room L-103
- RBA-07-026. "Acoustic characteristics of Churches of the Altiplano Andino, Influence of the Spanish architecture"  
*Villegas, Jorge, Recuero, Manuel*  
S.05 Wednesday 5th - 15:40 - Room L-103
- RBA-07-027-IP. Dutch Practical Guideline NPR 3438 - Ergonomics - noise at the workplace  
*Geerligs, Ruud; Svensson, Carsten*  
S.05 Wednesday 5th - 16:00 - Room L-103
- RBA-07-028. The effect of sound field characteristics on the measurement of heavy-weight impact sounds  
*Seung Yup Yoo; Sin Young Lee; Jin Yong Jeon*  
S.05 Wednesday 5th - 16:20 - Room L-103
- RBA-07-029-IP. Airborne sound transmission, ISO 140 and influence of ISO 717-1 spectrum adaptation terms  
*Smith, Sean; Macdonald, Russel; Lurcock, Daniel; Mackenzie, Robin*  
S.05 Wednesday 5th - 17:20 - Room L-203
- RBA-07-030-IP. Inter-comparison of laboratory measurements of dynamic stiffness  
*P. Fausti, F. Bettarello*  
S.05 Wednesday 5th - 17:40 - Room L-203
- RBA-07-031-IP. Influence of not-linearity in the uncertainty on room acoustics measurements  
*Tronchin, Lamberto; Durvilli, Ilaria; Tarabusi, Valerio.*  
Poster - Wednesday 5th afternoon - Board 36
- RBA-07-032. Propagation speed and absorption coefficient characteristics of airborne ultrasonic wave in porous materials  
*Aoki, Kenichi; Kamakura, Tomoo*  
Poster - Thursday 6th morning - Board 01
- RBA-07-033-IP. Laboratory evaluation of airborne sound insulation of lightweight wooden roofs  
*Di Bella, Antonino*  
Poster - Thursday 6th morning - Board 02
- RBA-07-034. Uncertainties in building acoustic single number quantities. How apply uncertainty calculation in the scope of the Portuguese regulation  
*Sónia Monteiro Antunes*  
Poster - Thursday 6th morning - Board 03
- RBA-08 – Microperforated materials**  
*Session Organizers: Kimiro Sagakami; Yong Shen*
- RBA-08-001-IP. From MPA to Strategically Designed Absorbers Using Solid Freeform Fabrication Techniques  
*Godbold, Oliver; Kang, Jian; Soar, Rupert; Buswell, Richard*  
S.06 Thursday 6th - 10:40 - Room L-102

- RBA-08-002-IP. Dual-size mpp absorber with coupled air cavity  
*Miasa, I Made*  
S.06 Thursday 6th - 11:00 - Room L-102
- RBA-08-003-IP. Quick Design for the Micro-perforated Sound Absorber  
*Shen, Yong; Wang, Han*  
S.06 Thursday 6th - 11:20 - Room L-102
- RBA-08-004-IP. Double-leaf microperforated panel space absorbers: A revised theory and detailed analysis  
*Sakagami, Kimihiro; Nakamori, Tomohito; Morimoto, Masayuki; Yairi, Motoki*  
S.06 Thursday 6th - 11:40 - Room L-102
- RBA-08-005-IP. Double leaf microperforated panel space absorbers: An experimental study for further improvement  
*Yairi, Motoki; Sakagami, Kimihiro; Morimoto, Masayuki*  
S.07 Thursday 6th - 15:00 - Room L-102
- RBA-08-006-IP. Sound insulation characteristics of a microperforated panel with a subdivided air layer  
*Toyoda, Masahiro; Daiji, Takahashi*  
S.07 Thursday 6th - 15:20 - Room L-102
- RBA-08-007-IP. Modeling the absorption of non planar acoustic materials  
*François-Xavier Bécot; Luc Jaouen; Emmanuel Gourdon*  
S.07 Thursday 6th - 15:40 - Room L-102
- RBA-08-008. The micro-slotted resonator with flexible tube bundles  
*Yadong Lu, Huide Tang, Jing Tian, Hongqi Li*  
S.07 Thursday 6th - 16:00 - Room L-102
- RBA-08-009-IP. Acoustic properties of perforated close-cell foams  
*Kirill V Horoshenkov; Mark J Swift, Siow N Ting*  
S.07 Thursday 6th - 16:20 - Room L-102
- RBA-08-010-IP. Vibro-acoustic properties of porous media from recycled granulates  
*Amir Khan, Kirill V Horoshenkov, Hadj Benkreira, Raj Patel*  
S.07 Thursday 6th - 16:40 - Room L-102
- RBA-09 – New materials and systems in building acoustics**  
*Session Organizer: Martijn Vercaammen*
- RBA-09-001-IP. Acoustical performance of clamped and perforated poroelastic plates  
*Attenborough, Keith; Aygun, Haydar*  
S.07 Thursday 6th - 17:00 - Room L-102
- RBA-09-002-IP. Frequency dependency and anisotropy of the elastic constants of (non-)porous materials and their influence on the usage in building acoustical applications.  
*Boeckx, Laurens; Descheemaeker, Jan; Nathalie, Geebelen; Khurana, Poonam; Vermeir, Gerrit; Desmet, Wim; Lauriks, Walter*  
S.07 Thursday 6th - 17:20 - Room L-102
- RBA-09-003. Acoustical and physical characterisation of a new porous absorbing plaster  
*Pompoli, Francesco; Bonfiglio, Paolo*  
S.07 Thursday 6th - 17:40 - Room L-102
- RBA-09-004-IP. Resilient ceiling construction in residential buildings  
*Nash, Anthony*  
S.08 Friday 7th - 09:00 - Room L-102
- RBA-09-005-IP. Acoustical and mechanical characterization of an innovative expanded sintered elasticized polystyrene (EPS-E) used as underlayer in floating floors  
*Schiavi, Alessandro; Pavoni Belli, Andrea; Russo, Francesco; Corallo, Mario;*  
S.08 Friday 7th - 09:20 - Room L-102

- RBA-09-006-IP. Hollow brick work with high internal losses  
*Schneider, Martin; Fischer, Heinz-Martin*  
S.08 Friday 7th - 09:40 - Room L-102
- RBA-09-007-IP. In-situ evaluation of sound insulation using transfer function measurements  
*Venegas C., Rodolfo; Undurraga L., Jaime*  
S.08 Friday 7th - 10:00 - Room L-102
- RBA-09-008. Validation of a difference potential based active noise control system  
*Hyun Lim; Sergei V. Utyuzhnikov; Yiu W. Lam; Mark R. Avis; Ali Turan*  
S.08 Friday 7th - 10:20 - Room L-102
- RBA-09-009. Product standards- measurng standards – prediction standards  
*Reis, Frigyes*  
S.08 Friday 7th - 10:40 - Room L-102
- RBA-09-010. The use of sintered aluminium for acoustic comfort in fibreless, humid, corrosive or clean environments  
*Wouter Rottiers*  
S.08 Friday 7th - 11:00 - Room L-102
- RBA-09-011-IP. Bottom-up approach for microstructure optimization of sound absorbing materials  
*Perrot, Camille; Chevillotte, Fabien; Panneton, Raymond; Olny, Xavier*  
S.08 Friday 7th - 11:20 - Room L-102
- RBA-09-012-IP. Variations of floor impact sound insulation performance for heavy-veight impact source according to the types of resilient layer in apartment house  
*Kim, Sun; Lee, Sang-Hoon*  
S.08 Friday 7th - 11:40 - Room L-102
- RBA-09-013. Influence of thickness and structural parameters on sound absorption coefficients of porous materials  
*Mirowska, Marianna; CzySewski, Kazimierz*  
Poster - Thursday 6th morning - Board 04
- RBA-10 – Open-plan office acoustics**  
*Session Organizer: John Bradley*
- RBA-10-001. Acoustic environment in finnish offices - the summary of questionnaire studies  
*Helenius, Riikka; Keskinen, Esko; Haapakangas, Annu; Hongisto, Valtteri*  
S.01 Monday 3rd - 15:00 - Room L-103
- RBA-10-002-IP. Work performance and office noise - Do they correlate?  
*Hongisto, Valtteri*  
S.01 Monday 3rd - 15:20 - Room L-103
- RBA-10-003-IP. Background speech varying in intelligibility - Effects on cognitive performance and perceived disturbance  
*Schlittmeier, Sabine J.; Liebl, Andreas; Hellbrück, Jürgen; Thaden, Rainer; Vorländer, Michael*  
S.01 Monday 3rd - 15:40 - Room L-103
- RBA-10-004-IP. Alternative room acoustic descriptors for open offices – progresses in standardization  
*Chigot, Pierre*  
S.01 Monday 3rd - 16:00 - Room L-103
- RBA-10-005-IP. Determination of acoustic conditions in open offices and suggestions for acoustic classification  
*Hongisto, Valtteri; Virjonen, Petra; Keränen, Jukka*  
S.01 Monday 3rd - 16:20 - Room L-103
- RBA-10-006-IP. A new model for acoustic design of open offices  
*Keränen Jukka, Virjonen Petra, Hongisto Valtteri*  
S.01 Monday 3rd - 16:40 - Room L-103
- RBA-10-007-IP. Designing and Assessing Speech Privacy in Open-Plan Offices  
*Bradley, John S.*  
S.01 Monday 3rd - 17:00 - Room L-103

- RBA-10-008. Open office acoustic design - multidimensional case studies  
*Krajcarz, Fabien*  
S.01 Monday 3rd - 17:20 - Room L-103
- RBA-10-009-IP. Acoustic Design in the New Architectural Trend of "Exposed Structures"  
*Roy, Kenneth*  
S.01 Monday 3rd - 17:40 - Room L-103
- RBA-10-010-IP. Integration of furnishing in open plan office design: Case studies  
*Asselineau, Marc*  
S.02 Tuesday 4th - 09:00 - Room L-103
- RBA-10-011-IP. Acoustic comfort in open plan library spaces  
*Markham, Benjamin*  
S.02 Tuesday 4th - 09:20 - Room L-103
- RBA-10-012-IP. Designing for Speech Privacy in Open Plan Healthcare Environments  
*Roy, Kenneth*  
S.02 Tuesday 4th - 09:40 - Room L-103
- RBA-10-013-IP. Open Plan In the USA: Regulatory Trends Catalyze Action  
*Sykes, David; Cavanaugh, William; Rockstroh, Kurt*  
S.02 Tuesday 4th - 10:00 - Room L-103
- RBA-11 – Reflections, scattering and diffraction in room acoustics**  
*Session Organizers: Lily Wang, Jonathan Rathsam*
- RBA-11-001-IP. Low Frequency Limits of Reflector Arrays  
*Skålevik, Magne*  
S.08 Friday 7th - 09:00 Room L-101
- RBA-11-002-IP. Scattered responses from suspended reflector panels with rounded edges  
*Rathsam, Jonathan; Wang, Lily M.*  
S.08 Friday 7th - 09:20 Room L-101
- RBA-11-003-IP. Culling insignificant diffraction components for interactive acoustic simulations  
*Calamia, Paul T.; Svensson, U. Peter*  
S.08 Friday 7th - 09:40 Room L-101
- RBA-11-004-IP. Subjective evaluations of sound diffusion using a scale model hall  
*Jeon, Jin Yong; Ryu, Jong Kwan*  
S.08 Friday 7th - 10:00 Room L-101
- RBA-11-005-IP. Lüke and Power Residue Sequence Diffusers  
*Dadiotis, Konstantinos; Cox, Trevor J.; Angus, James A. S.*  
S.08 Friday 7th - 10:20 Room L-101
- RBA-11-006-IP. Investigating the Scattering Behavior of Incident Plane Waves using BEM  
*Bansal, Mahesh; Feistel, Stefan; Ahnert, Wolfgang; Bock, Steffen*  
S.08 Friday 7th - 10:40 Room L-101
- RBA-11-007-IP. Room acoustics: Compact representation for multi-source binaural playback  
*Duraiswami, Ramani; Zotkin, Dmitry N.; Gumerov, Nail A.*  
S.08 Friday 7th - 11:00 Room L-101
- RBA-11-008. Objective evaluations of sound scattering by using scale models and computer simulation  
*Shin-ichi Sato; Yong Hee Kim; Hye Mi Lee; Jin Yong Jeon*  
S.08 Friday 7th - 11:20 Room L-101
- RBA-11-009. Sound absorption measurement using MLS method. How much is the final result affected by the non-linearities of the measurement chain?  
*Guidorzi, Paolo; Garai, Massimo*  
S.08 Friday 7th - 11:40 Room L-101

- RBA-11-010. Study of scattering panel pairs in a virtually anechoic environment  
*Rizzi, Lorenzo; Farina, Angelo; Galaverna, Paolo; Martignon, Paolo; Conti, Lorenzo; Rosati, Andrea*  
Poster - Thursday 6th morning - Board 05
- RBA-11-011. Scattering and absorption of an oblique incident plane wave by a finite impedance strip  
*Sum, K. S.; Pan, J.*  
Poster - Thursday 6th morning - Board 06
- RBA-12 – Sound insulation between dwellings**  
*Session Organizer: Jens Holger Rindel*
- RBA-12-001-IP. Optimization of ceramic brick double walls with peripheral resilient layers  
*Arines, Susana; Cortés, Azucena; Fuente, Marta; Guigou - Carter, Catherine; Claude, Martin; Villot, Michel*  
S.06 Thursday 6th - 09:00 - Room L-103
- RBA-12-002-IP. Influence of Seals in Sound Insulation Prediction of Steel Double Panel Doors  
*Herrera, Jose; Recuero, Manuel*  
S.06 Thursday 6th - 09:20 - Room L-103
- RBA-12-003-IP. Parametric survey of factors controlling low frequency impact sound transmission in dwellings  
*Neves e Sousa, Albano; Gibbs, Barry*  
S.06 Thursday 6th - 09:40 - Room L-103
- RBA-12-004. Improving techniques for screening impact sound insulation.  
*Dodd, George; Li, Ming*  
S.06 Thursday 6th - 10:00 - Room L-103
- RBA-12-005. Acoustic Characteristics of Korea Traditional Houses  
*Tai Gang, Lee; Hang, Kim; Sun Woo, Kim*  
S.06 Thursday 6th - 10:20 - Room L-103
- RBA-12-006. In situ measurements of the structural reverberation time of several floors  
*Alba, Jesús; Venero, Juan; del Rey, Romina; Ramis Soriano, Jaime; Escuder, Eva*  
S.06 Thursday 6th - 10:40 - Room L-103
- RBA-12-007. In situ measurements of the structural reverberation time of several brick walls  
*Alba, Jesús; Venero, Juan; del Rey, Romina; Ramis Soriano, Jaime; Escuder, Eva; Gavalda, Raquel*  
S.06 Thursday 6th - 11:00 - Room L-103
- RBA-12-008. Vibration reduction index of different junctions measured in situ  
*Alba, Jesús; Venero, Juan; del Rey, Romina; Ramis Soriano, Jaime; Escuder, Eva*  
S.06 Thursday 6th - 11:20 - Room L-103
- RBA-12-009. Loss factor measurements on plasterboard  
*Delannoy, Jaime; Recuero, Manuel*  
S.06 Thursday 6th - 11:40 - Room L-103
- RBA-12-010. Dependence of RW with loss factor for plasterboard and perception on changes of sound insulation  
*Delannoy, Jaime; Recuero, Manuel*  
S.07 Thursday 6th - 15:00 - Room L-103
- RBA-12-011. Reduction of the flanking transmission of gypsum walls by elastic interlayers  
*Ruff, Andreas; Fischer, Heinz-Martin*  
S.07 Thursday 6th - 15:20 - Room L-103
- RBA-12-012. Saint-Gobain Insulation acoustical comfort classes  
*Andrew Koster*  
S.07 Thursday 6th - 15:40 - Room L-103
- RBA-12-013. Effect of IACC on subjective response to heavy-weight impact sounds  
*Lee, Pyoung Jik; Kim, Jae Ho; Sato, Shin-ichi; Jeon, Jin Yong*  
S.07 Thursday 6th - 16:00 - Room L-103

RBA-12-014. Comparative analysis of airborne and impact sound insulation of typical Spanish dwellings built at different times  
*González Suárez J.; García Sastre L.; Barrero Fernández A; Martín Bravo M.A.; Lorenzana Lorenzana T; Sanz Requena J.F.*  
S.07 Thursday 6th - 16:20 - Room L-103

**RBA-13 – Spatial hearing in concert auditoria**  
*Session Organizer: Mike Barron*

RBA-13-001-IP. Spatial Perception of Distance, Azimuth, and Envelopment when the Direct to Reverberant Ratio (d/r) is below -6dB  
*Griesinger, David*  
S.01 Monday 3rd - 15:00 - Room L-102

RBA-13-002-IP. Auditory room size perception in concert auditoria  
*Cabrera, Densil; Jeong, Dae-Up*  
S.01 Monday 3rd - 15:20 - Room L-102

RBA-13-003-IP. Behavior of lateral energy in small concert halls  
*Möller, Henrik; Hyde, Jerald R.*  
S.01 Monday 3rd - 15:40 - Room L-102

RBA-13-004-IP. 3-D sound field simulation of concert halls for performing musicians  
*Ueno, Kanako ; Yokoyama, Sakae ; Tachibana, Hideki*  
S.01 Monday 3rd - 16:00 - Room L-102

RBA-13-005-IP. Spatial responsiveness forty years on.  
*Marshall, A. Harold*  
S.01 Monday 3rd - 16:20 - Room L-102

RBA-13-006-IP. Acoustical Renovation of The Queen Elizabeth Theatre, Vancouver: Spatial Sound in a Wide Room  
*O'Keefe, John*  
S.01 Monday 3rd - 16:40 - Room L-102

RBA-13-007-IP. The importance of reflective walls far from the stage for audience in concert auditoria  
*Hanyu Toshiki*  
Poster - Thursday 6th morning - Board 07

**RBA-14 – Structure borne sound sources (Impact noise and equipment noise)**  
*Session Organizers: Michel Villot; Barry Gibbs*

RBA-14-001-IP. Attenuation and flanking transmission in lightweight structures  
*Brunskog, Jonas; Lhomond, Alice; Ohlrich, Mogens*  
S.07 Thursday 6th - 16:40 - Room L-103

RBA-14-002-IP. Prediction of re-radiated noise from structure born vibration due to railway  
*Coquel, Guillaume; Villot, Michel, Jean, Philippe, Duée, Raphaël*  
S.07 Thursday 6th - 17:00 - Room L-103

RBA-14-003-IP. Experimental study of the activity and mobility of structure-borne sound sources by a reception plate method  
*Gibbs, Barry*  
S.07 Thursday 6th - 17:20 - Room L-103

RBA-14-004-IP. Sound absorption in rooms at low frequencies: Room content as obstacles and absorbers  
*Gustavo da S. V. de Melo, Samir N. Y. Gerges, Barry M. Gibbs*  
S.07 Thursday 6th - 17:40 - Room L-103

RBA-14-005-IP. Model of a person walking as a structure borne sound source  
*Matthias Lievens; Jonas Brunskog*  
S.08 Friday 7th - 09:00 - Room L-103

- RBA-14-006-IP. On the use of a single equivalent receiver mobility in lightweight buildings  
*Mayr, Andreas R.; Gibbs, Barry*  
S.08 Friday 7th - 09:20 - Room L-103
- RBA-14-007-IP. Direct and indirect methods to assess the structure-borne power transmission into receiving structures  
*Scheck, Jochen; Heinz-Martin Fischer; Gibbs, Barry*  
S.08 Friday 7th - 09:40 - Room L-103
- RBA-14-008-IP. Structure borne sound of washing machines calculated with PREN 12354-5  
*Simmons, Christian*  
S.08 Friday 7th - 10:00 - Room L-103
- RBA-14-009-IP. Testing floor coverings mounted on lightweight floors using ISO/FDIS 140-11  
*Villot, Michel; Chene, Jean-Baptiste ; Houssain, Simon*  
S.08 Friday 7th - 10:20 - Room L-103
- RBA-14-010-IP. Sound transmission through pipe systems and into plate structures in buildings - a simplified SEA model  
*Bron-van der Jagt, Susanne*  
S.08 Friday 7th - 10:40 - Room L-103
- RBA-14-011-IP. A comprehensive analytical model for prediction of low frequency impact sound transmission in dwellings  
*Neves e Sousa, Albano; Gibbs, Barry*  
S.08 Friday 7th - 11:00 - Room L-103
- RBA-14-012. Characterisation of a structure-borne sound source using independent and in-situ measurement  
*Elliott, Andrew; Moorhouse, Andy; Pavic, Goran*  
S.08 Friday 7th - 11:20 - Room L-103
- RBA-14-013. Floor impact sound insulation and vibration using standard heavy and soft impact sources in the wood-framed model building for experiments  
*Hiramitsu, Atsuo; Tsujimura, Yukio; Houno, Hirotsugu; Murakami, Tomonori*  
S.08 Friday 7th - 11:40 - Room L-103
- RBA-14-014. How to improve impact sound insulation in a lightweight module based system  
*Ljunggren, Fredrik; Ågren, Anders*  
S.01 Monday 3rd - 17:20 - Room L-102
- RBA-14-015. Control of noise and vibrations produced by HVAC mechanical equipment in a hotel: A case study  
*Mateus, Diogo; Santos, Paulo*  
S.01 Monday 3rd - 17:40 - Room L-102
- RBA-15 – Virtual acoustics and auralisation methods**  
*Session Organizer: Durand Begault*
- RBA-15-001-IP. Experiences with an electronic enhancement system in a mid-size theatre  
*Behrens, Tobias; Ahnert, Wolfgang*  
S.02 Tuesday 4th - 09:00 - Room L-102
- RBA-15-002-IP. Applications of Directional Audio Coding in Audio  
*Pulkki, Ville*  
S.02 Tuesday 4th - 09:20 - Room L-102
- RBA-15-003-IP. Perceptually-based auralization  
*Tsingos, Nicolas*  
S.02 Tuesday 4th - 09:40 - Room L-102
- RBA-15-004-IP. Investigations of multi-channel auralization technique for solo instruments and orchestra  
*Vigeant, Michelle C.; Wang, Lily M.; Rindel, Jens Holger*  
S.02 Tuesday 4th - 10:00 - Room L-102



- RBA-15-005. Virtual Acoustic Prototype techniques applied to the simulation of noise from rainfall on skylights  
*Moorhouse, Andy*  
S.02 Tuesday 4th - 10:20 - Room L-102
- RBA-15-006. Assessment of Room Absorption by Normal and Hearing Impaired People  
*Saher, Konca; Rindel, Jens Holger; Nijs, Lau*  
S.02 Tuesday 4th - 10:40 - Room L-102
- RBA-15-007. Assessment of Musical Instrument Performances for Practice Rooms by Musicians  
*Saher, Konca; Özis, Feridun; Rindel, Jens Holger*  
S.02 Tuesday 4th - 11:00 - Room L-102
- RBA-15-008. Calculation of interaural cross-correlation coefficient (IACC) of any music signal convolved with impulse responses by using the IACC of the sound field and the autocorrelation function of the sound source  
*Shimokura, Ryota; Tronchin, Lamberto; Cocchi, Alessandro*  
S.02 Tuesday 4th - 11:20 - Room L-102
- RBA-15-009. Spatial coherence between microphones with arbitrary first-order directivity in reverberant acoustic fields  
*Kuster, Martin; van Walstijn, Maarten*  
S.02 Tuesday 4th - 11:40 - Room L-102
- RBA-15-010-IP. Interactive multi-channel auralization with camera-based tracking  
*Kajastila, Raine; Lokki, Tapio; Savioja, Lauri*  
Poster - Thursday 6th morning - Board 08
- RBA-15-011. Effects of directivity of microphones and loudspeakers in sound field reproduction based on wave field synthesis  
*Kimura, Toshiyuki; Kakehi, Kazuhiko*  
Poster - Thursday 6th morning - Board 09
- RBA-15-012. Multi-channel Recording and Reproduction for Minimizing the Difference in the Spatial Covariances Between the Original and Reproduced Sound Fields  
*Yoshinori Takahashi; Mikio Tohyama*  
Poster - Thursday 6th morning - Board 10
- RBA-16 – RBA-General**
- RBA-16-001. Rating Sound Insulation in Terms of Speech Intelligibility  
*Park, Hyeon Ku, Bradley, John S., Gover, Bradford N.*  
S.07 Thursday 6th - 15:00 - Room L-202
- RBA-16-002. A MATLAB simulation of “shoebox” room acoustics and its educational use in a music technology course  
*Campbell, Douglas R.*  
S.07 Thursday 6th - 15:20 - Room L-202
- RBA-16-003. Sabine’s formula revisited with acoustic quadruphony  
*Stanzial, Domenico*  
S.07 Thursday 6th - 15:40 - Room L-202
- RBA-16-004. Prediction of speech intelligibility along underground platforms using a web based model  
*Dance, Stephen*  
S.07 Thursday 6th - 16:00 - Room L-202
- RBA-16-005. Characteristics of Sound Absorption and Insulation Performance of Korean Traditional Windows  
*Hang, Kim ; Tai Gang, Lee; Sun Woo, Kim*  
S.07 Thursday 6th - 16:20 - Room L-202
- RBA-16-006. Optimal reverberation conditions in churches  
*Francesco Martellotta*  
S.07 Thursday 6th - 16:40 - Room L-202

- RBA-16-007. The assessment of reverberant conditions of underground stations  
*Nowicka, Elzbieta*  
S.07 Thursday 6th - 17:00 - Room L-202
- RBA-16-008. Passive tuned loudspeakers as absorbers for room acoustics  
*Oldfield, Robert G.; Cox, Trevor J.*  
S.07 Thursday 6th - 17:20 - Room L-202
- RBA-16-009. Comparative acoustical studies of two Goan churches  
*Tavares, Menino Allan S.M.Peter ; Rajagopalan, S ; Sharma, Satish Jagannath*  
S.07 Thursday 6th - 17:40 - Room L-202
- RBA-16-010. Architectural Acoustics among Nonspecialists: Myths and Misconceptions  
*Viveiros, Elvira; Duarte, Elisabeth de A. C.*  
S.08 Friday 7th - 09:00 - Room L-202
- RBA-16-011. Measurement of normal and oblique incidence absorption coefficients using a scanning laser doppler vibrometer  
*Vuye, Cedric; Vanlanduit, Steve; De Sitter, Gert; Guillaume, Patrick; Boeckx, Laurens*  
S.08 Friday 7th - 09:20 - Room L-202
- RBA-16-012. On the calculation of uncertainties of single number ratings in building acoustics  
*Wittstock, Volker*  
S.08 Friday 7th - 09:40 - Room L-202
- RBA-16-013. Analysis of two orchestra rehearsal rooms in Thessaloniki, Greece  
*Zepidou, Georgia; Dance, Stephen; Nestoras, Christos*  
S.08 Friday 7th - 10:00 - Room L-202
- RBA-16-014. Study on Acoustic Characteristics for Civic Building Lobbies in Taiwan  
*Rong-Ping Lai; Yu-Shing Chiang; Kai-hua Liu*  
S.08 Friday 7th - 10:20 - Room L-202

#### **SAV – Structural Acoustics and Vibration**

##### **SAV-01 – Applications of analytical techniques in general**

*Session Organizers: Pedro M. Jordan; Stanley Chin-Bing*

- SAV-01-001-IP. Dynamic analysis of a switched reluctance motor  
*Lladó, Juan; Sánchez, Beatriz; Martínez, Abelardo; Pérez, F. José; Martín, Bonifacio; Laloya, Eduardo; Pollán, Tomás; Vicuña, Javier*  
S.04 Wednesday 5th - 10:20 - Room R-103
- SAV-01-002-IP. Direct numerical solution of the wave equation describing acoustic scattering and propagation through spatially complex dispersive media  
*Guy V. Norton*  
S.04 Wednesday 5th - 10:40 - Room R-103
- SAV-01-003-IP. Traveling waves and singular surfaces in nonlinear acoustics  
*P. M. Jordan,*  
S.04 Wednesday 5th - 11:00 - Room R-103
- SAV-01-004. The relative significance of cross-order interface mobilities  
*Bonhoff, H. A.; Petersson, B. A. T.*  
S.04 Wednesday 5th - 11:20 - Room R-103
- SAV-01-005. Influence of cam profile errors on the dynamic behavior of a cam follower system  
*Trabelsi, Hassen; Chaâri, Fakher; Haddar, Mohamed*  
S.04 Wednesday 5th - 11:40 - Room R-103
- SAV-01-006. Energy approach to evaluation of vibrational energy transmission in joints  
*Cieslik, Jacek; Bochniak, Wojciech*  
S.05 Wednesday 5th - 15:00 - Room R-103

- SAV-01-007. Wave approach modeling of sandwich and laminate composite structures with viscoelastic layers  
*Sebastian Ghinet, Nouredine Atalla*  
S.05 Wednesday 5th - 15:20 - Room R-103
- SAV-01-008. Discrete vibrating systems with random damping: An identification method based on envelopes  
*Heinkelé, Christophe*  
S.05 Wednesday 5th - 15:40 - Room R-103
- SAV-01-009. Retrieval of a model for the removal of dispersion from wave fields in plates  
*Hörchens, Lars; De Vries, Diemer*  
S.05 Wednesday 5th - 16:00 - Room R-103
- SAV-01-010. Vibration and acoustic radiation analysis of a stiffened fluid-loaded plate using a wavenumber approach and a discrete Fourier transform  
*Maxit, Laurent*  
S.05 Wednesday 5th - 16:20 - Room R-103
- SAV-01-011. Sound radiation from a perforated unbaffled plate  
*Putra, Azma; Thompson, David*  
S.05 Wednesday 5th - 16:40 - Room R-103
- SAV-01-012. Comparison of integral and matrix formulation to estimate the mechanical radiation impedance of plane sound radiators  
*Arenas, Jorge; Alba, Jesus; Ramis, Jaime*  
S.05 Wednesday 5th - 17:00 - Room R-103
- SAV-01-013. The influence of material parameters and geometry on an active junction  
*Svensson, Jonas L.; Andersson, Patrik B.U.; Kropp, Wolfgang*  
S.05 Wednesday 5th - 17:20 - Room R-103
- SAV-01-014. The attenuation of structure-borne sound in non-periodically stiffened plates  
*Tschakert, R.; Petersson, B.A.T.*  
S.05 Wednesday 5th - 17:40 - Room R-103
- SAV-01-015. Vibration analysis of a tyre model using the wave finite element method  
*Waki, Yoshiyuki; Mace, Brian ; Brennan, Michael*  
S.06 Thursday 6th - 09:00 - Room R-103
- SAV-01-016. Approximate modal model of a discontinuously varying thickness rectangular plate  
*Pastrian, Raúl; Morcillo, Miguel Angel; Redon, Emmanuel; Herráez, Marta*  
Poster - Thursday 6th morning - Board 11
- SAV-01-017. Vibration of a cube excited by one percussion  
*Nieves, Francisco J.; Bayón, Ana; Salazar, Félix; Gascón, Francisco*  
Poster - Thursday 6th morning - Board 12
- SAV-01-018. Modal analysis and numerical simulation of the dynamic behaviour in multilayer panels  
*Ivorra Chorro, S.; Segura Alcaraz, J.G.; Gadea Borrell, J.M.; Francés Monllor, J.*  
Poster - Thursday 6th morning - Board 13
- SAV-01-019. Studies of capability of PZT actuators in ASAC  
*Svec, Petr; Jandak, Vojtech; Jiricek, Ondrej; Brothánek, Marek*  
Poster - Thursday 6th morning - Board 14
- SAV-02 – Simulation and environmental factors**  
*Session Organizers: Yun-Fan Hwang; Jin-Huang Huang*
- SAV-02-001-IP. Coupling between two membranes of a japanese drum  
*Suzuki, Hideo; Hwang, Yun-Fan*  
S.06 Thursday 6th - 09:20 - Room R-103

- SAV-02-002-IP. Numerical simulation of fluid-structure interactions in a Japanese drum  
*Hwang, Y. F.; Chia-Pei Weng; Suzuki, Hideo*  
S.06 Thursday 6th - 09:40 - Room R-103
- SAV-02-003. Finite element modelling for determination of acoustics attenuation  
*Julia, Sonnerup; Delphine, Bard; Per-Anders Wernberg; Göran, Sandberg.*  
S.06 Thursday 6th - 10:00 - Room R-103
- SAV-02-004-IP. Analytical description of Gaussian beams with finite aperture  
*Ding, Desheng; Lee, Bing-Jean; Huang, Jin H.*  
S.06 Thursday 6th - 10:20 - Room R-103
- SAV-02-005. Numerical computation of the acoustic pressure in a coupled plate/fluid problem.  
Experimental validation  
*Sagartzazu, Xabier; Hervella-Nieto, Luis; Pagalday, Juan Manuel*  
S.06 Thursday 6th - 10:40 - Room R-103
- SAV-02-006-IP. Wave Dispersion in Composite Plates Containing Spheroidal Inclusions  
*Liu, Yu-Cheng; Hwang, Y.F.; Huang, Jin H.*  
S.06 Thursday 6th - 11:00 - Room R-103
- SAV-02-007-IP. Enhanced working-amplitude distribution of ultrasonic wide-blade horn with the use  
of a wave-tuning plate  
*Dai, Wen-Long; Y.C. Liu; Huang, Jin H.*  
S.06 Thursday 6th - 11:20 - Room R-103
- SAV-02-008. Investigation on the dynamic behavior of a compound planetary gear drive  
*Dhouib, Seddik; Hbaieb, Riadh; Chaari, Fakher; Haddar, Mohamed*  
S.06 Thursday 6th - 11:40 - Room R-103
- SAV-02-009. Vibro-acoustic behavior of a gearbox transmission  
*Slim Abbes; Tahar Fakhfakh; Mohamed Haddar*  
Poster - Thursday 6th morning - Board 15
- SAV-02-010. Experimental and numerical analysis of vibroacoustic attenuation in sandwich structures  
*Martinez, Manex; Cortés, Fernando; Elejabarrieta, María Jesús*  
Poster - Thursday 6th morning - Board 16
- SAV-03 – SAV-General**
- SAV-03-001. Measurement of dynamic properties of recycled tire rubber granulates and their mixture  
*Ameur, Chettah; Slah, Chedly; Mohamed, Ichchou; Olivier, Bareille*  
S.07 Thursday 6th - 15:00 - Room R-103
- SAV-03-002. Hybrid techniques for simulating the transmission loss of a car door  
*Martín Sánchez, Juan Sabas, Hidalgo Otamendi, Antonio, González Ganso, Jose Andrés*  
S.07 Thursday 6th - 15:20 - Room R-103
- SAV-03-003. Radiated Noise from Engine Blocks of Marine Engines  
*Deahwan Kim; Chinsuk Hong; Weui Bong Jeong*  
S.07 Thursday 6th - 15:40 - Room R-103
- SAV-03-004. Wave guiding effects in light weight plates with truss-like core geometries  
*Kohrs, Torsten; Petersson, Björn A.T.*  
S.07 Thursday 6th - 16:00 - Room R-103
- SAV-03-005. Modelling wave propagation in cylinders using a wave/finite element technique  
*Manconi, Elisabetta; Mace, Brian R*  
S.07 Thursday 6th - 16:20 - Room R-103
- SAV-03-006. Plate Vibration and Internal Acoustic Characteristics in Cylindrical Structure with an Excited End Plate  
*Kawanabe, Tomoaki; Masuda, Naoya; Moriyama, Hiroyuki*  
S.07 Thursday 6th - 16:40 - Room R-103

- SAV-03-007. Energy transport in coupled beams and plates  
*Savin, Éric*  
S.07 Thursday 6th - 17:00 - Room R-103
- SAV-03-008. A systematic approach for determining the acoustic radiation modes of structures with arbitrary geometry shapes  
*Jiancheng Tao; Xiaojun Qiu*  
S.07 Thursday 6th - 17:20 - Room R-103
- SAV-03-009. The effects of internal resonances in vibration isolators under absolute velocity feedback control  
*Yan, Bo; Brennan, Mike; Elliott, Steve; Ferguson, Neil*  
S.07 Thursday 6th - 17:40 - Room R-103
- SAV-03-010. Level measurement based on vibration analysis  
*Romina Kehl*  
S.08 Friday 7th - 09:00 - Room R-103
- SAV-03-011. State of the art and perspective about human vibration measurement & evaluation  
*Miccoli Giuseppe*  
S.08 Friday 7th - 09:20 - Room R-103
- SAV-03-012. The study on sound-absorbing properties of oblique micro-perforated panel  
*Rong-Ping Lai, Chung-Chiech Chiang, Kai-Hua Liu*  
Poster - Thursday 6th morning - Board 17
- SAV-03-013. Selective near-field acoustic holography  
*Alba Fernández, Jesús; Escuder Silla, Eva; Ramis Soriano, Jaime; del Rey Tormos, Romina*  
Poster - Thursday 6th morning - Board 18
- SAV-03-014. Vibro-acoustic behavior of Spanish bells with metallic and wooden yoke  
*Ivorra, Salvador; Vera, Jenaro, Francés, Jorge*  
Poster - Thursday 6th morning - Board 19
- SAV-03-015. Vibration reduction of resiliently mounted pump-like machineries  
*Kim, Hyun-Sil; Kim, Jae-Seung; Kim, Bong-Ki*  
Poster - Thursday 6th morning - Board 20
- SAV-03-016. Insertion loss of cylindrical structures excited by high intensity acoustic loads  
*Ark, S.-H.; Seo, S.-H.; Jeong, H.-K.; Jang, Y.-S.; Yi, Y.-M.; Cho G.-R.*  
Poster - Thursday 6th morning - Board 21

## **ULT – Ultrasonics**

### **ULT-01 – Acoustic radiation force and biomedical applications**

*Session Organizer: Armen Sarvazyan*

- ULT-01-001-IP. Radiation force as a universal phenomenon in wave motion  
*Sarvazyan, Armen*  
S.02 Tuesday 4th - 09:00 - Room R-203
- ULT-01-002-IP. New Developments in Supersonic Shear Imaging  
*Mathias Fink*  
S.02 Tuesday 4th - 09:20 - Room R-203
- ULT-01-003-IP. Clinical Applications of Acoustic Radiation Force Impulse Imaging  
*Nightingale, Kathryn; Palmeri, Mark; Zhai, Liang; Frinkley, Kristin; Wang, Michael; Dahl, Jeremy; Pinton, Gianmarco; Hsu, Stephen; Fahey, Brian; Dumont, Douglas; Trahey, Gregg*  
S.02 Tuesday 4th - 09:40 - Room R-203
- ULT-01-004-IP. Application of Dynamic Radiation Force of Ultrasound and Tissue Acoustic Response in Medical Imaging  
*M. Fatemi, A. Alizad, D. H. Whaley, J. F. Greenleaf*  
S.02 Tuesday 4th - 10:00 - Room R-203

- ULT-01-005-IP. Material properties from ultrasound simulated vibrometry  
*James F. Greenleaf; Shigao Chen, Xiaoming Zhang*  
S.02 Tuesday 4th - 10:20 - Room R-203
- ULT-01-006. Identification of Prostate Tissue Structures and Lesions by Vibro-acoustography: *A. Alizad, F. G. Mitri, B. J. Davis, J. F. Greenleaf, M. Fatemi*  
S.02 Tuesday 4th - 10:40 - Room R-203
- ULT-01-007. In Vivo ARFI Imaging of Atherosclerosis with Validation in a Relevant Pig Model of CVD  
*Behler, Russell; Nichols, Timothy; Merricks, Elizabeth; Gallippi, Caterina*  
S.02 Tuesday 4th - 11:00 - Room R-203
- ULT-01-008. Generation and propagation of shear waves in inhomogeneous rubber-like media  
*Andreev, Valeriy; Vedernikov, Andrey*  
S.02 Tuesday 4th - 11:20 - Room R-203
- ULT-01-009. Transient Acoustic Radiation Force Elastography for HIFU Applications  
*Berry, Gearóid; Melodelima, David; Xu, Lijun; Shipley, Jacqueline; Bamber, Jeffrey; ter Haar, Gail; Rivens, Ian; Duck, Francis*  
S.02 Tuesday 4th - 11:40 - Room R-203
- ULT-02 – Air-borne transducers for ultrasonic detection**  
*Session Organizer: Tadeus Gudra; Alexei Moussalov*
- ULT-02-001-IP. Design of air-coupled ultrasound transducers for use in scanning arrays  
*Deveugele, Jurgen; Bulcaen, Dirk; Blomme, Erik*  
S.03 Tuesday 4th - 15:00 - Room R-203
- ULT-02-002-IP. Non-contact ultrasound for the characterization of porous materials  
*Boeckx, Laurens; Sebaa, Naima; De Ryck, Laurent; Lagrain Bert; Lauriks, Walter*  
S.03 Tuesday 4th - 15:20 - Room R-203
- ULT-02-003. Acoustic and acousto-optic characteristics of silicone nanofoam  
*Takeshi Iino, Kentaro Nakamura, Sadayuki Ueha*  
S.03 Tuesday 4th - 15:40 - Room R-203
- ULT-02-004-IP. Industrial applications of air-coupled ultrasound  
*Hutchins, David; Gan, Tat Hean; Pallav, Prakash; Schindel, David*  
S.03 Tuesday 4th - 16:00 - Room R-203
- ULT-02-005-IP. A non-contact system for transporting objects using ultrasonic levitation  
*Gudra, Tadeusz; Perkowski, Daniel; Opielinski, Krzysztof J.*  
S.03 Tuesday 4th - 16:20 - Room R-203
- ULT-02-006. Plane wave front amplitude equalization for air-coupled concave array transducers used in a Lamb waves NDT system  
*Prego Borges, José Luis; García, Mercedes; Yañez, Yago; Chávez, Juan Antonio; Salazar, Jordi; Turó, Antoni; García Hernandez, Miguel Jesus.*  
Poster - Thursday 6th morning - Board 22
- ULT-02-007. Underground imaging using shear waves -Resolution improvement using pulse compression-  
*Hiraku, Kawasaki; Tsuneyoshi, Sugimoto*  
Poster - Thursday 6th morning - Board 23
- ULT-03 – Analytical and numerical (FEM) transducer modelling**  
*Session Organizer: A. Lula; N. Lamberti*
- ULT-03-001-IP. Piezo-transducer modelling with a switched output voltage: application to energy harvesting and self-powered vibration control  
*Guyomar, Daniel; Lallart, Mickaël*  
S.07 Thursday 6th - 16:20 - Room R-204

- ULT-03-002-IP. FE analysis of a high displacement ultrasonic actuator based on a flexural mechanical amplifier  
*Lula, Antonio; Lamberti, Nicola; Pappalardo, Massimo*  
S.07 Thursday 6th - 16:40 - Room R-204
- ULT-03-003-IP. A method for the automatic characterization of piezoelectric ceramic elements  
*Lamberti, Nicola Antonio; Lula, Antonio; Caputo, Andrea*  
S.07 Thursday 6th - 17:00 - Room R-204
- ULT-03-004-IP. Practical Application of Advanced Computational Acoustics  
*Lerch, Reinhard; Kaltenbacher, Manfred; Meiler, Martin*  
S.07 Thursday 6th - 17:20 - Room R-204
- ULT-03-005. The Potential for Finite Difference Time Domain in Piezoelectric Materials  
*M. Ferri, R.Picó, F. Camarena, B. Roig, J. Redondo, M.R. Avis*  
S.07 Thursday 6th - 17:40 - Room R-204
- ULT-04 – Capacitive ultrasonic transducers: Modelling and technology**  
*Session Organizer: Massimo Pappalardo*
- ULT-04-001-IP. Polymer-based CMUTS  
*Hutchins, David, Billson, Duncan, Bradley, Robert*  
S.03 Tuesday 4th - 16:40 - Room R-203
- ULT-04-002-IP. Radiation impedance of circular CMUT membranes  
*Köymen, Hayrettin; \_enlik, Muhammed N.; Olcum, Selim; Atalar, Abdullah*  
S.03 Tuesday 4th - 17:00 - Room R-203
- ULT-04-003-IP. Echographic images improvements with a CMUT probe  
*Caliano, Giosuè; Savoia, Alessandro; Caronti, Alessandro; Longo, Cristina; Gatta, Philipp; Pappalardo, Massimo*  
S.03 Tuesday 4th - 17:20 - Room R-203
- ULT-04-004-IP. Capacitive micromachined ultrasonic transducers: 14 years later  
*B. Pierre; T. Khuri-Yakub*  
S.03 Tuesday 4th - 17:40 - Room R-203
- ULT-04-005. Air-coupled CMUT arrays based on MUMPS  
*Octavio Manzanares, Alberto; Martínez Graullera, Oscar; Martín Arguedas, Carlos J.; Gómez-Ullate Alvear, Luis; Montero de Espinosa Freijo, Francisco*  
Poster - Thursday 6th morning - Board 24
- ULT-05 – HIFU in medical therapy**  
*Session Organizer: Lawrence A. Crum*
- ULT-05-001-IP. Fifteen years of prostate cancer treatment with HIFU  
*Jean Yves Chapelon, Emmanuel Blanc, Albert Gelet*  
S.05 Wednesday 5th - 16:00 - Room R-203
- ULT-05-002-IP. HIFU Therapy for Palliation of Advanced Pancreatic Cancer  
*Hwang, Joo Ha; Wang, Yak-Nam; Kargl, Steve; Cunitz, Bryan; Warren, Cinderella; Dunmire, Barbrina; Curra, Francesco; Zhou, Yufeng; Upton, Melissa; Starr, Frank; Mitchell, Stuart*  
S.05 Wednesday 5th - 16:20 - Room R-203
- ULT-05-003-IP. The role of bubbles in clinical high intensity focused ultrasound  
*ter Haar G., McLaughlan J., Rivens I.*  
S.05 Wednesday 5th - 16:40 - Room R-203
- ULT-05-004-IP. Brain therapy using focused ultrasound  
*Kullervo Hynynen*  
S.05 Wednesday 5th - 17:00 - Room R-203
- ULT-05-005. Focal shift in high intensity focused ultrasound  
*Makov, Yuri; Sánchez-Morcillo, Victor; Camarena, Francisco; Espinosa, Victor*  
S.05 Wednesday 5th - 17:20 - Room R-203

- ULT-05-006. Perspectives of Tumour Therapy by Local Ultrasonic Hyperthermia and Thermoablation  
*Lierke, Ernst G.; Hemsel, Tobias; Leibinger, Martin*  
S.05 Wednesday 5th - 17:40 - Room R-203
- ULT-05-007 Investigating the role of ultrasonic scattering in the wave absorption phenomenon  
*Cortela, Guillermo, C. A. Pereira, Wagner; San Emeterio, Jose Luis, Negreira, Carlos*  
Poster - Thursday 6th morning - Board 25
- ULT-06 – High intensity acoustics near surfaces and interfaces**  
*Session Organizers: Bertran Dubus; Philippe Blanc-Benon*
- ULT-06-001-IP. Non-linear acoustic effects induced by temperature gradients near the fluid/solid interfaces  
*Gusev, Vitaly; Penelet, Guillaume*  
S.01 Monday 3rd - 15:00 - Room R-204
- ULT-06-002-IP. Acoustically-induced nonlinear seismic effects above buried objects  
*Attenborough, Keith; Qin, Qin*  
S.01 Monday 3rd - 15:20 - Room R-204
- ULT-06-003-IP. A non-contact sliding table based on near field acoustic levitation  
*Nakamura, Kentaro; Ueha, Sadayuki*  
S.01 Monday 3rd - 15:40 - Room R-204
- ULT-06-004. High-speed jetting following shock-wave reflection at planar and curved liquid-gas interfaces  
*Zijlstra, Aaldert; Ohl, Claus-Dieter*  
S.01 Monday 3rd - 16:00 - Room R-204
- ULT-07 – High-power ultrasonic transducers**  
*Session Organizer: Sadayuki Ueha; Luis Gaete*
- ULT-07-001-IP. Industrial requirements in high-power ultrasonic transducers for defoaming  
*Rodriguez, Germán; Acosta, Victor M.; Pinto, Alberto; Gallego-Juárez, Juan A.*  
S.01 Monday 3rd - 16:20 - Room R-204
- ULT-07-002-IP. High-power ultrasound to asses the stress state in rocks  
*Gaete-Garretón, Luis; Vargas-Hernández, Yolanda, Sepúlveda-Palma, Francisco*  
S.01 Monday 3rd - 16:40 - Room R-204
- ULT-07-003. Feasibility of generating predetermined complex patterns of multiple foci using 2-D phased arrays: possible practical applications  
*Gavrilov, Leonid R.; Hand, Jeff W.*  
S.01 Monday 3rd - 17:00 - Room R-204
- ULT-07-004-IP. Ultrasonic complex vibration systems for high-power ultrasonics using diagonal slit converters and different velocity metal ring-pair converters  
*Jiromaru, Tsujino; Tetsugi, Ueoka; Ryohei, Karatsu; Shun, Tanaka; Goh, Kishimoto; Yuu, Kubodera; Atsuyuki, Suzuki*  
S.01 Monday 3rd - 17:20 - Room R-204
- ULT-07-005-IP. Point-convergence type aerial ultrasonic sound source using a flexural vibrating circular plate and high-intensity sound waves by that sound source  
*Ito, Youichi*  
S.01 Monday 3rd - 17:40 - Room R-204
- ULT-07-006-IP. Large capacity ultrasonic complex vibration sources using multiple transducers integrated using a circular vibration disk  
*Jiromaru, Tsujino; Tetsugi, Ueoka, Tohru, Aoyama; Takafumi, Kyuzen; Takaharu, Dai*  
S.02 Tuesday 4th - 09:00 - Room R-204
- ULT-07-007-IP. Influence of acoustic parameters in ultrasonic comminution of Zn powders in liquid phase  
*Gaete-Garretón, Luis; Vargas-Hernández, Yolanda, Cares-Pacheco, María, Vega, Ricardo*  
S.02 Tuesday 4th - 09:20 - Room R-204



- ULT-07-008. A novel ultrasonic linear motor using plate longitudinal vibrators assembled in a T-shape  
*Aoyagi, Manabu; Matsutate, Yuki; Tomikawa, Yoshiro; Takano, Takehiro*  
Poster - Thursday 6th morning - Board 26
- ULT-07-009. Ultrasonic Motor Using a Piezoelectric Ceramic Multilayer Vibrator With Diagonally Symmetric Form  
*Takano, Takehiro; Tamura, Hideki; Tomikawa, Yoshiro; Aoyagi, Manabu*  
Poster - Thursday 6th morning - Board 27
- ULT-08 – High-power ultrasound in large-scale sonochemical reactors**  
*Session Organizer: Timothy Mason*
- ULT-08-001-IP. An overview of large scale sonochemical reactors  
*Timothy J Mason*  
S.06 Thursday 6th - 11:00 - Room R-204
- ULT-08-002-IP. Results of the coupling of microbiological and sonochemical treatment of azo dye wastewater in a pilot-plant scale bio-membrane reactor system  
*Astrid Rehorek*  
S.06 Thursday 6th - 11:20 - Room R-204
- ULT-08-003-IP. The prospects for scale-up of the ultrasonic extraction of antioxidants from Rosemary herb  
*Larysa Paniwnyk*  
S.06 Thursday 6th - 11:40 - Room R-204
- ULT-08-004-IP. Power ultrasound and scale-up: flow-cell reactors, crystallisation, and particle engineering  
*Ruecroft, Graham*  
S.07 Thursday 6th - 15:00 - Room R-204
- ULT-08-005-IP. Some approaches to the scale up of ultrasonic processing by VTT in Finland  
*Juha Heikkinen*  
S.07 Thursday 6th - 15:20 - Room R-204
- ULT-08-006-IP. Minerals applications of high power ultrasonics  
*A.F. Collings, P.B. Gwan; A.P. Sosa Pintos*  
S.07 Thursday 6th - 15:40 - Room R-204
- ULT-08-007-IP. Synthesis of nano-ZnO/poly(methylmethacrylate) composite through sonoelectrochemistry  
*Audrey Mandroyan, L. Paniwnyk, T.J. Mason*  
Poster - Thursday 6th morning - Board 37
- ULT-09 – New power ultrasonic processes and systems**  
*Session Organizer: Enrique Riera*
- ULT-09-001-IP. Continuous ultrasonic Process for biodiesel production  
*Stavarache, Carmen; Vinatoru, Mircea; Maeda, Yasuaki; Bandow, Hiroshi*  
S.02 Tuesday 4th - 09:40 - Room R-204
- ULT-09-002-IP. Acoustic shock waves as a cell-permeabilization method  
*Loske, Achim; Martínez de la Escalera, Gonzalo; Armenta, Eduardo; Varela, Alfredo*  
S.02 Tuesday 4th - 10:00 - Room R-204
- ULT-09-003-IP. The enhancement of mass transport processes using ultrasound  
*Kentish, Sandra; Ashokkumar, Muthupandian*  
S.02 Tuesday 4th - 10:20 - Room R-204
- ULT-09-004-IP. A brief history of the application of ultrasonics in food processing  
*Mawson, Raymond; Knoerzer, Kai*  
S.02 Tuesday 4th - 10:40 - Room R-204

- ULT-09-005-IP. Influence of process variables on hot air drying assisted by power ultrasound  
*García-Pérez, José V.; Cárcel, Juan A. ; Benedito, José; Riera, Enrique; Mulet, Antonio*  
S.02 Tuesday 4th - 11:00 - Room R-204
- ULT-09-006-IP. Prototype for the use of ultrasound in supercritical media  
*Riera, Enrique; Blanco, Alfonso, Acosta, Víctor M., Gallego-Juárez, Juan A., Blasco, Miguel, Mulet, Antonio*  
S.02 Tuesday 4th - 11:20 - Room R-204
- ULT-09-007-IP. Sono-crystallization: from experimental results to microscopical interpretations  
*Louisnard, Olivier; Espitalier, Fabienne*  
S.02 Tuesday 4th - 11:40 - Room R-204
- ULT-09-009-IP. Effect of US treatment on the physical properties of whey and soy proteins  
*Vesna Lelas, Anet Rejek Jambrak, Zoran Herceg, Suzana Rimac Brnđić*  
S.03 Tuesday 4th - 15:20 - Room R-204
- ULT-09-010-IP. Chemistry under simultaneous microwave and ultrasonic irradiation  
*Pedro Cintas, Giancarlo Cravotto*  
S.03 Tuesday 4th - 15:40 - Room R-204
- ULT-09-011. Porosity Engineering of Polymeric Foams by localised sonication  
*Torres-Sanchez, Carmen; Corney, Jonathan*  
S.03 Tuesday 4th - 16:00 - Room R-204
- ULT-09-012. Measuring output acoustic power of an ultrasonic surgical system using the calorimetric method  
*Antonio Petosic, Bojan Ivancevic, Kristian Jambroic*  
S.03 Tuesday 4th - 16:20 - Room R-204
- ULT-09-013. The receiving range of sound field measurements in cavitating media: Definition of an effective distance  
*Koch, Christian; Jenderka, Klaus-Vitold*  
S.03 Tuesday 4th - 16:40 - Room R-204
- ULT-09-014. Technical aspects of use of ultrasound for intensification processing: new path to "green chemistry"  
*Yachmenev, Val; Condon, Brian; Lambert, Allan*  
S.03 Tuesday 4th - 17:00 - Room R-204
- ULT-09-015. Design of a Multi-DOF Linear Ultrasonic Motor by use of a First Longitudinal Mode and Two First Bending Modes  
*Kanasugi, Hideaki; Maeno, Takashi*  
Poster - Thursday 6th morning - Board 28
- ULT-09-016. Design of a ring-type ultrasonic motor by use of mixed vibration modes for improvement of efficiency and life time by reduction of slippage  
*Toeda, Makoto; Maeno, Takashi*  
Poster - Thursday 6th morning - Board 29
- ULT-09-017. Atomization of high-viscosity materials by one point convergence of sound waves radiated from an aerial ultrasonic source using a transverse vibrating plate  
*Miura, Hikaru*  
Poster - Thursday 6th morning - Board 30
- ULT-10 – Signal processing for ultrasonic imaging & detection**  
*Session Organizer: Jose Luis San Emeterio*
- ULT-10-001-IP. Automatic Segmentation of Breast Tumours on Ultrasound Images Using Genetic Algorithms and Morphological Operators  
*Alvarenga, André V.; Pereira, Wagner C.A.; Infantosi, Antonio F.C.; Azevedo, Carolina M.*  
S.04 Wednesday 5th - 09:00 - Room R-203

- ULT-10-002-IP. Angle-Dependent Deconvolution of Ultrasonic Time-of-Flight Diffraction (TOFD) Signals  
*Honarvar, Farhang; Yaghootian, Amin*  
S.04 Wednesday 5th - 09:20 - Room R-203
- ULT-10-003-IP. On the use of the non-stationarity of the structural noise for defect visibility enhancement in ultrasonic inspections  
*Izquierdo, M.A.G.; Hernández, M.G.; Molero, M; Anaya, J.J*  
S.04 Wednesday 5th - 09:40 - Room R-203
- ULT-10-004-IP. Comparison of digital signal processing methods for the detection of isolated flaws using perpendicular ultrasonic transducers  
*Rodríguez, Miguel A.; Ramos, Antonio; San Emeterio, José L.*  
S.04 Wednesday 5th - 10:00 - Room R-203
- ULT-10-005-IP. Shift invariant wavelet processing of ultrasonic traces  
*Pardo, Emilia; San Emeterio, Jose Luis; Rodriguez, Miguel Angel; Ramos, Antonio*  
S.04 Wednesday 5th - 10:20 - Room R-203
- ULT-10-006-IP. A neuro-genetic approach to non-invasive temperature estimation in multilayered media under ultrasound therapy  
*Teixeira, C. A.; Ruano, M. Graça; Ruano, A. E.; Pereira, W. C. A.*  
S.04 Wednesday 5th - 10:40 - Room R-203
- ULT-10-007-IP. Ultrasonic signal processing for archaeological ceramic classification  
*Salazar, Addisson; Parra, Angela; Vergara, Luis; Doménech, María Teresa; Serrano, Arturo*  
S.04 Wednesday 5th - 11:00 - Room R-203
- ULT-10-008. Lamb Wave generation with an air-coupled piezoelectric array using square chirp excitation  
*Garcia-Rodriguez, Mercedes; Yañez, Yago; Garcia-Hernandez, Miguel; Salazar, Jordi; Turo, Antoni; Chavez, Juan Antonio*  
S.04 Wednesday 5th - 11:20 - Room R-203
- ULT-10-009. Ultrasound chirp imaging using a 40-MHz annular array  
*Jonathan Mamou, Jeffrey A., Ketterling Ronald, H. Silverman*  
S.04 Wednesday 5th - 11:40 - Room R-203
- ULT-10-010. Ultrasonic multiscale modelling for material characterisation: The multiresolution analysis for signal interpretation  
*Fairouz Bettayeb*  
S.05 Wednesday 5th - 15:00 - Room R-203
- ULT-10-011. Sparse deconvolution method for wave separation in NDT  
*Roux, Aurelien; Simon, Laurent; Idier, Jerffiome; Potel, Catherine; Lebon, Stephane; de Belleval, Jean-Francois; Gherbezza, Jean-Marc*  
S.05 Wednesday 5th - 15:20 - Room R-203
- ULT-10-012. Evaluation of the concrete strength by using the quality factor of multi-reflected ultrasound  
*Tao, Liang; Mori, Yahiro; Motooka, Seiichi*  
S.05 Wednesday 5th - 15:40 - Room R-203
- ULT-10-013-IP. Separation of concurrent echoes depending on the emitting source using DS-CDMA  
*Ureña, J.; Pérez, M C.; Ochoa, A.; Hernández, A.; De Marziani, C. ; Álvarez, F. J.; García, J. J.; Jiménez, A.; Jiménez, J. A.*  
Poster - Thursday 6th morning - Board 31
- ULT-10-014. A wavelet application to improve the quality of images obtained using the synthetic aperture focusing technique  
*Calas, Héctor; Acevedo, Pedro, Moreno, Eduardo*  
Poster - Thursday 6th morning - Board 32

- ULT-10-015. Study of an algorithm's performance to generate ultrasonic images using soft  
*Acevedo, Pedro; Calas, Héctor*  
Poster - Thursday 6th morning - Board 33
- ULT-10-016. Flaw detection on highly scattering materials using multiresolution analysis  
with time-frequency thresholding  
*Molero, M.; Izquierdo, M.A.G.; Hernández, M.G.; Anaya, J.J.; Sánchez, T.*  
Poster - Thursday 6th morning - Board 34
- ULT-10-017. Time reversal determination of particle concentration in liquid media  
*Pérez, Nicolás; Negreira, Carlos, Canetti, Rafael*  
Poster - Thursday 6th morning - Board 35
- ULT-10-018. Study on the submerged underground imaging with ultrasonic wave  
*Seo, Kunihiko; Shirakawa, Takashi; Sugimoto, Tsuneyoshi*  
Poster - Thursday 6th morning - Board 36
- ULT-10-019. Modeling a turbulent atmosphere as a dynamic channel for narrow-band ultrasonic signals  
*Álvarez, F. J.; Ureña, J.; Hernández, A.; Jiménez, A.; Villadangos, J. M.; Pérez, M. C.*  
Poster - Thursday 6th afternoon - Board 01
- ULT-10-020. Bessel transducers: Analysis of the temperature field  
*Cortela, Guillermo, Aulet, Alina, Calas, Hector, C. A. Pereira, Wagner; Eiras, José A., Moreno, Eduardo, Negreira, Carlos*  
Poster - Thursday 6th afternoon - Board 02

#### ULT-11 Sonochemical water treatment

*Session Organizer: Astrid Rehorek*

- ULT-11-001-IP. Process design approach to sonochemical water treatment based on the example  
of dichloroaniline tauride  
*Astrid Rehorek*  
S.06 Thursday 6th - 09:00 - Room R-204
- ULT-11-002-IP. Treatment of ballast water by high power ultrasonics  
*A.F. Collings, P.B.Gwan, M.T.Binet, J.L.Stauber*  
S.06 Thursday 6th - 09:20 - Room R-204
- ULT-11-003-IP. Use of high power ultrasonics in processes of waste water purification  
*Oleg V. Abramov, Vladimir O. Abramov, Anatoly V. Shkolnikov*  
S.06 Thursday 6th - 09:40 - Room R-204
- ULT-11-004. Comparison between photocatalysis with TiO<sub>2</sub> and ultrasound in the degradation  
of aqueous solutions of 1,2 dichlorobenzene  
*Ardizzone Silvia, Bianchi Claudia L., Cappelletti Giuseppe, Pirola Carlo, Selli Elena, Ragaini Vittorio*  
S.06 Thursday 6th - 10:00 - Room R-204
- ULT-11-005-IP. Ultrasound, electrochemistry and water treatment  
*Larysa Paniwyk*  
S.06 Thursday 6th - 10:20 - Room R-204
- ULT-11-006-IP. Ultrasonically assisted dewatering of waste activated sludge  
*Hanna Kyllönen, Pentti Pirkonen, Antti Grönroos*  
S.06 Thursday 6th - 10:40 - Room R-204

#### ULT-12 – Sonoelectrochemical processes

*Session Organizer: David Walton; José González García*

- ULT-12-001-IP. Electrochemistry with ultrasound: State of the research in the field  
*Sáez, Veronica; Bonete, Pedro; Esclapez-Vicente, Deseada; Iniesta, Jesús; González-García, José; Walton, David*  
S.08 Friday 7th - 09:00 - Room R-204

- ULT-12-002-IP. Cavitation, shockwaves and electrochemistry – an experimental and theoretical approach to a complex environment  
*Birkin, Peter; Offin, Douglas; Leighton, Timothy*  
**S.08 Friday 7th - 09:20 - Room R-204**
- ULT-12-003. Acoustic cavitation near a surface explored via nanosecond electrochemistry.  
*Maisonhaute, Emmanuel*  
**S.08 Friday 7th - 09:40 - Room R-204**
- ULT-12-004-IP. Electrochemical measurements of ultrasonic wind and asymmetric cavitation  
*Hihn, Jean-Yves; Doche Marie-Laure, Mandroyan, Audrey; Pallet Bruno; Viennet; Rémy; Maisonhaute Emmanuel; Bailly Yannick*  
**S.08 Friday 7th - 10:00 - Room R-204**
- ULT-12-005-IP. Small scale preparative electrolysis in sono-electrochemical cell optimized with the help of simulation of ultrasonic intensity distribution  
*Klima, Jiri; Ludvik, Jiri; Urban, Jiri; González-García, José; Sáez, Veronica; Frías-Ferrer, Angel*  
**S.08 Friday 7th - 10:20 - Room R-204**
- ULT-12-006. Sono-electrochemical deposition of catalytically active iron metal at boron doped diamond electrodes: application to electroreduction of chloroacetates  
*Sáez, Veronica; González-García, Jose; Kulandainathan, M. Anbu; Marken, Frank*  
**S.08 Friday 7th - 10:40 - Room R-204**
- ULT-12-007. Sonochemical immobilization of noble metal nanoparticles on the surface of metal oxides  
*Mizukoshi, Yoshiteru; Masahashi, Naoya; Tanabe, Shuji; Seino, Satoshi; Yamamoto, A, Takao*  
**S.08 Friday 7th - 11:00 - Room R-204**
- ULT-12-008. Synthesis of  $\text{CO}_{65}\text{FE}_{35}$  alloy nanoparticles by pulsed sono-electrochemistry  
*Zin, Valentina; Dabalà, Manuele*  
**S.08 Friday 7th - 11:20 - Room R-204**
- ULT-12-009-IP. The application of sono-electrochemistry in the synthesis of nanometals  
*Aharon Gedanken*  
**S.08 Friday 7th - 11:40 - Room R-204**
- ULT-12-010. An in-situ EQCM study of sono-electrochemical deposition of metallic materials  
*Matic, Sladjana; Schneider, Oliver; Argiris, Christos*  
**Poster - Thursday 6th afternoon - Board 03**
- ULT-12-011. Sono-electrochemical production of gold and silver nanoparticles  
*Dabalà Manuele, Cojocar Paula, Vincenzo Antonello, Zin Valentina, Brunelli Katya, Cavallotti Pietro Luigi*  
**Poster - Thursday 6th afternoon - Board 04**
- ULT-13 – Tissue characterization by ultrasound**  
*Session Organizer: Johan M. Thijssen*
- ULT-13-001-IP. High frequency ultrasonic imaging and tissue characterization  
*K. K. Shung*  
**S.03 Tuesday 4th - 17:20 - Room R-204**
- ULT-13-002-IP. IntraVascular Ultrasound  
*Anton FW van der Steen, Johannes A Schaar, David Goertz, Martijn Frijlink, Nico de Jong Patrick W Serruys and. Nicolaas Bom,*  
**S.03 Tuesday 4th - 17:40 - Room R-204**
- ULT-13-003-IP. New developments in elasticity imaging  
*Bamber, Jeffrey; Barbone, Paul; Berry, Gearoid; Bush, Nigel; Chakraborty, Aabir; Coutts, Louise; Crescenti, Remo; Duck, Francis; Liederman, Ricardo; MelodeLima, David; Miller, Naomi; Oberai, Assad; Shipley, Jacqueline*  
**S.04 Wednesday 5th - 09:00 - Room R-204**

- ULT-13-004-IP. Cardio Vascular Ultrasound Elastography  
*De Korte, Chris L.; Lopata, Richard G.P.Hansen, Hendrik H.G.; Nillesen, Maartje M.; Gerrits, Inge H.G.; Kapusta, Livia.; Thijssen, Johan M.*  
**S.04 Wednesday 5th - 09:20 - Room R-204**
- ULT-13-005. A new high frequency ultrasonic indentation method dedicated to the elastic properties assesement: Diagnostic of muscular dystrophy  
*Leydier, Audrey; Hnia, Karim; Laux, Didier; Hugon, Gérald; Mathieu, Jérôme; Ferrandis, Jean-Yves; Despaux, Gilles; Mornet, Dominique*  
**S.04 Wednesday 5th - 09:40 - Room R-204**
- ULT-13-006-IP. Ultrasound contrast agents: from diagnosis to therapy  
*Tranquart François, Bouakaz Ayache, Bleuzen Aurore, Palanchon Peggy, Olar Monica, Correas Jean-Michel*  
**S.04 Wednesday 5th - 10:00 - Room R-204**
- ULT-13-007-IP. Tissue characterization by ultrasonic spectrum analysis  
*Feleppa, Ernest J.*  
**S.04 Wednesday 5th - 10:20 - Room R-204**
- ULT-13-008. Power mesurement of airborne ultrasonic transducers  
*José Francisco Chinchurreta, Rob Hekkenberg, Francisco Montero de Espinosa*  
**S.04 Wednesday 5th - 10:40 - Room R-204**
- ULT-13-009-IP. Computer-aided ultrasound B-mode diagnosis  
*Thijssen, Johan M.; Weijers, Gert; de Korte, Chris L.*  
**S.04 Wednesday 5th - 11:00 - Room R-204**
- ULT-13-010-IP. Quantitative ultrasound for bone characterization  
*Laugier, Pascal; Talmant, Maryline*  
**S.04 Wednesday 5th - 11:20 - Room R-204**
- ULT-13-011. Statistical sensitivity of the envelope of pulse-echo signal backscattered in trabecular bone: Simulation study  
*Litniewski, Jerzy*  
**S.04 Wednesday 5th - 11:40 - Room R-204**
- ULT-13-012. Monitoring thermal changes in soft tissue by 1D transient elastography  
*Benech, Nicolás; Negreira, Carlos*  
**Poster - Thursday 6th afternoon - Board 05**
- ULT-13-013. Simulation of biologic tissue image formation by ultrasound back-scattering  
*Rafik, Serhane; Takek, Boutkedjirt; Hakim, Djelouah*  
**Poster - Thursday 6th afternoon - Board 06**
- ULT-13-014. Reflection and transmission of plane ultrasonic pulses in a three layer biological structure  
*J. C. B. Leite; J. L. San Emeterio; W.C.A. Pereira*  
**Poster - Thursday 6th afternoon - Board 07**
- ULT-13-015. Scatterer size and the discrimination of in vitro liver fibrosis  
*Meziri, Mahmoud; Pereira, Wagner C. A.; Remita, Naamane; Boudjema, Bouzid; Laugier, Pascal*  
**Poster - Thursday 6th afternoon - Board 08**
- ULT-13-016. A Computer-Controlled Phantom of the Heart Valve Movement Designed for Ultrasonic Examinations  
*Opielinski, Krzysztof J.; Tubis, Elzbieta; Gudra, Tadeusz*  
**Poster - Thursday 6th afternoon - Board 09**
- ULT-14 – Ultrasonic manipulation of micron-sized particles and cells**  
*Session Organizers: Jeremy Hawkes; Itziar González*
- ULT-14-001-IP. Manipulation of cells in ultrasound standing waves for life sciences applications  
*Bazou, Despina; Coakley, W Terence*  
**S.01 Monday 3rd - 15:00 - Room R-203**

- ULT-14-002-IP. Ultrasonic particle manipulation devices formed by resonantly-excited, cylindrical structures  
*Kaduchak, Gregory; Ward, Michael D.; Goddard, Gregory R.*  
S.01 Monday 3rd - 15:20 - Room R-203
- ULT-14-003-IP. Modeling of the acoustic field within micromachined fluidic devices  
*Stefano Oberti; Adrian Neild; Jürg Dual*  
S.01 Monday 3rd - 15:40 - Room R-203
- ULT-14-004-IP. Ultrasonic particle manipulation approaches in on-line vibrational spectroscopy  
*Radel, Stefan; Schnöller, Johannes; Dominguez-Vidal, Ana; Lendl, Bernhard; Gröschl, Martin; Benes, Ewald*  
S.01 Monday 3rd - 16:00 - Room R-203
- ULT-14-005. Movement of airborne particles in tubular metal resonators  
*Jeremy J. Hawkes, Rito Mijarez-Castro, Peter R. Fielden; Pramukh N Jayassekera*  
S.01 Monday 3rd - 16:20 - Room R-203
- ULT-14-006. Gentle cell handling using ultrasonic standing waves in a chip-based perfusion system for cell characterization and on-chip cultivation  
*Hultström, Jessica; Manneberg, Otto; Hertz, Hans M.; Wiklund Martin*  
S.01 Monday 3rd - 16:40 - Room R-203
- ULT-14-007. Experiments and modelling of a stepped horn and a plate using natural frequencies and mode shapes for controlling particles motion  
*Rito Mijarez-Castro, Jeremy J. Hawkes, Peter R. Fielden, Pramukh N Jayassekera*  
S.01 Monday 3rd - 17:00 - Room R-203
- ULT-14-008. Acoustic evaluation of ion-exchange  
*Hirawa, Shungo; Okada, Tetsuo*  
S.01 Monday 3rd - 17:20 - Room R-203
- ULT-14-009-IP. Ultrasonic manipulation in miniature focused resonators as a multipurpose toolbox for handling and enrichment of bio-active particles and cells  
*Martin Wiklund*  
S.01 Monday 3rd - 17:40 - Room R-203
- ULT-14-010-IP. Designing for nodal position in planar resonators for ultrasonic manipulation  
*Martyn Hill, Rosemary J Townsend, Nicholas R Harris*  
S.01 Monday 3rd - 18:00 - Room R-203
- ULT-14-011-IP. Airborne Cell Analysis  
*Seyed Tabaei, Hongyan Liu, Loy Alkafadji, Estera Dey, Eva Degerman, Jonas Johansson, Anders Kristensen, Staffan Nilsson*  
S.01 Monday 3rd - 18:20 - Room R-203
- ULT-14 -012 PHY-01-002. Ultrasonic immuno-agglutination tests for food-borne pathogenic bacteria  
*Ossina, Natalya; Panikov, Nikolai; Sizova, Maria; Bystryak, Simon*  
Poster - Thursday 6th afternoon - Board 10
- ULT-14 -013 PHY-01-003. HIV antibody detection using an ultrasound particle agglutination method  
*Ossina, Natalya; Ketema, Fassil; Constantine, Niel; Bystryak, Simon*  
Poster - Thursday 6th afternoon - Board 11
- ULT-15 – Ultrasonic transducer systems for imaging & detection**  
*Session Organizers: Marc Lethiecq; Antonio Ramos*
- ULT-15-001-IP. Ultrasonic Systems for Imaging & Detection  
*Hillger, Wolfgang*  
S.06 Thursday 6th - 09:00 - Room R-203
- ULT-15-002-IP. Excitation principles for bulk acoustic-wave sensors  
*Lucklum, Raff; Hempel, Ulrike; Osorio Garcia; Maria Isabel, Hauptmann, Peter; Lucklum, Frieder; Vetelino, John F.*  
S.06 Thursday 6th - 09:20 - Room R-203

- ULT-15-003-IP. Doppler Ultrasound Blood Flow Measurement System  
*García-Nocetti, Fabián; Solano-González, Julio; Fuentes-Cruz, Martín; Moreno-Hernández, Eduardo; Villar-Inclán, Alejandro; Prohías-Martínez, Juan*  
**S.06 Thursday 6th - 09:40 - Room R-203**
- ULT-15-004-IP. Piezoelectric thick film technologies for high frequency transducer applications  
*Franck Levassort; Rasmus Lou-Moeller, Erling Ringgaard, E. Filoux, Konstantin Astafiev, Wanda Wolny, Marc Lethiecq.*  
**S.06 Thursday 6th - 10:00 - Room R-203**
- ULT-15-005-IP. Design, fabrication and characterization of multimode monolithic piezoelectric transducers  
*Hladky Anne-Christine ; Newnham Robert E.; Dubus Bertrand*  
**S.06 Thursday 6th - 10:20 - Room R-203**
- ULT-15-006-IP. Advanced electronic interfaces for the monitoring of AT-CUT quartz crystal resonators used as acoustic sensors in fluid media  
*Arnau, Antonio; García, José Vicente; Jiménez, Yolanda; Ferrari, Vittorio; Ferrari Marco*  
**S.06 Thursday 6th - 10:40 - Room R-203**
- ULT-15-007-IP. Air Coupled Lamb Wave Based NDE Ultrasonic System  
*García-Hernandez, Miguel J.; Kichou, Hassanne; Prego-Borges, Jose Luis; Garcia-Rodriguez, Mercedes; Salazar, Jordi; Turo, Antoni; Chavez, Juan Antonio.*  
**S.06 Thursday 6th - 11:00 - Room R-203**
- ULT-15-008-IP. Limited diffraction Bessel Transducers  
*Moreno Eduardo*  
**S.06 Thursday 6th - 11:20 - Room R-203**
- ULT-15-009-IP. Spatial focalization in "chaotic-cavities- transducers" with time reversal technique  
*Pérez Nicolás; Negreira Carlos*  
**S.06 Thursday 6th - 11:40 - Room R-203**
- ULT-15-010-IP. Ultrasonic device development for sewage velocity and sediment concentration measurements  
*Anne Pallares, Farès Abda, Abdelhalim Azbaid, Denis Ensminger, Stéphane Fischer, Pierre Francois, Philippe Schmitt*  
**S.07 Thursday 6th - 15:00 - Room R-203**
- ULT-15-011-IP. Ultrasonic transduction system for imaging with a low number of transducers located at different planes  
*Rodríguez, Miguel A.; Ramos, Antonio; San Emeterio, José L.*  
**S.07 Thursday 6th - 15:20 - Room R-203**
- ULT-15-012-IP. Circuitual modelling in transient regime of ultrasonic transceivers for imaging and detection including non-ideal behaviours  
*Ruíz, Abelardo; Ramos, Antonio; San Emeterio, José Luis; Sanz, Pedro Tomas*  
**S.07 Thursday 6th - 15:40 - Room R-203**
- ULT-15-013-IP. Non destructive testing and evaluation of heterogeneous solids using non linear ultrasonics and acoustic emission: Towards the assessment of the material remaining life time  
*Rachid El Guerjouma, Mourad Bentahar, Hanane Nechad, Anne Marec, Jean-Hugh Thomas*  
**S.07 Thursday 6th - 16:00 - Room R-203**
- ULT-15-014. Time domain analysis of ultrasonic signals for non-invasive temperature estimation  
*Salido Ricardo, Bazan Ivonne, Ramos Antonio, Vera Arturo, Leija Lorenzo*  
**S.07 Thursday 6th - 16:20 - Room R-203**
- ULT-15-015. Design of a pulsed wave Doppler ultrasound blood flow detector for cardiovascular applications  
*Fuentes-Cruz, Martín; Solano-González, Julio; García-Nocetti, Fabián*  
**Poster - Thursday 6th afternoon - Board 12**
- ULT-15-016. Extension of the MOT model for radial modes of piezoelectric ceramics exhibiting Bessel polarizations  
*Calás H.; Pérez-Fernández L.D.; Figueredo J.; Moreno E.; Eiras J.A.; Leija L.*  
**Poster - Thursday 6th afternoon - Board 13**



- ULT-15-017. Non-destructive ultrasonic test of orange dehydration  
*Camarena, Francisco; Hemsel, Tobias; Espinosa, Víctor; Twiefel, Jens; Ardid, Miquel; Martínez-Mora, Joan; Gandia, Joan Babtiste*  
Poster - Thursday 6th afternoon - Board 14
- ULT-15-018. A new approach to modelling Lamb waves beam generated in laminate plates using coupled ultrasonic transducers  
*H.B. Kichou, J.A. Chavez, J. Salazar, A. Turo, M.J. Garcia-Hernandez*  
Poster - Thursday 6th afternoon - Board 15
- ULT-15-019. Manufacturing and experimental investigation of 2-2 piezocomposite transducer arrays  
*Adriano Alippi; Angelo Biagion; Francesco Paolo Branca; Franco Marinozzi; Fabiano Bini; Federico Patanè*  
Poster - Thursday 6th afternoon - Board 16
- ULT-16 – Ultrasound contrast agents**  
*Session Organizers: Thomas J. Matula; M. Versluis*
- ULT-16-001. Recent developments in theoretical modeling of microbubble contrast agents  
*Charles C. Church*  
S.07 Thursday 6th - 16:40 - Room R-203
- ULT-16-002-IP. Combined optical and acoustical characterization of individual US contrast microbubbles  
*Sijl, Jeroen; Vos, Rik; de Jong, Nico; Lohse, Detlef; Versluis, Michel*  
S.07 Thursday 6th - 17:00 - Room R-203
- ULT-16-003-IP. Engineering Microbubble Agents for Enhanced Detectability in Therapeutic Applications  
*Stride, Eleanor; Eckersley, Robert; Chetty, Kevin; Sennoga, Charles*  
S.07 Thursday 6th - 17:20 - Room R-203
- ULT-16-004-IP. Polymer-shelled gas containing capsules for ultrasound mediated drug delivery  
*Böhmer, Marcel; Chlon, Ceciel; Guédon Constant; Shi, William; Hall, Christopher; Schmidt, Brian; van Wamel, Annemieke; Kooiman, Klazina; Emmer, Marcia; and de Jong; Nico*  
S.07 Thursday 6th - 17:40 - Room R-203
- ULT-16-005-IP. Polymer-shelled contrast agents excited with 40-MHz ultrasound  
*Jeffrey A. Ketterling; Jonathan Mamou*  
S.08 Friday 7th - 09:00 - Room R-203
- ULT-16-006. 3D optical micromanipulation of ultrasound contrast agents: bubble-wall and bubble-bubble interactions  
*Overvelde, Marlies; Garbin, Valeria; Dollet, Benjamin; Cojoc, Dan; Ferrari, Enrico; De Jong, Nico; Di Fabrizio, Enzo; Lohse, Detlef; Versluis, Michel*  
S.08 Friday 7th - 09:20 - Room R-203
- ULT-16-007-IP. Cavitation Biology and the Safety of Contrast-Aided Diagnostic Ultrasound  
*Douglas L. Miller*  
S.08 Friday 7th - 09:40 - Room R-203
- ULT-16-008-IP. Experimental investigation of thermal response of the backscatter from ultrasound contrast agent by means of a commercial clinical ultrasound equipment  
*Adriano Alippi; Andrea Bettucci; Angelo Biagioni; Francesco Paolo Branca; Franco Marinozzi; Fabiano Bini; Federico Patanè; Francesco Repanotti*  
S.07 Thursday 6th - 18:00 - Room R-203
- ULT-17 – ULT-General**
- ULT-17-001. Modelling of ultrasonic testing of cracks in claddings  
*Boström, Anders*  
S.05 Wednesday 5th - 15:00 - Room R-204
- ULT-17-002. A Virtual Instrument for Measurement and Visualization of Acoustic Pressure Field from Ultrasound Transducers  
*Alvarenga, A.V.; Costa-Felix, R.P.B.; Oliveira, E.G.*  
S.05 Wednesday 5th - 15:20 - Room R-204

- ULT-17-003. Acquisition of ultrasound signals for flour products testing  
*J. García-Álvarez, M. Gómez, A. Turó, J.A. Chávez, M.J. García, J. Salazar*  
S.05 Wednesday 5th - 15:40 - Room R-204
- ULT-17-004. Interaction of Gaussian laser beam with the ultrasonic wave of cylindrical symmetry  
*Ireneusz Grulkowski; Dawid Jankowski; Piotr Kwiek*  
S.05 Wednesday 5th - 16:00 - Room R-204
- ULT-17-005. Acoustical Properties of Binary Mixtures of Heptane with Ethyl acetate and Butyl acetate  
*Manisha Gupta, Divya Shukla, Shashi Singh, Shahla Parveen and J.P. Shukla*  
S.05 Wednesday 5th - 16:20 - Room R-204
- ULT-17-006. Acoustical, optical and thermodynamical investigation of ternary mixtures of Cyclohexanone + Heptane + Hexane using an ultrasonic technique  
*Irudayaraj Johnson*  
S.05 Wednesday 5th - 16:40 - Room R-204
- ULT-17-007. Ultrasonic study of Intermediate-valent Intermetallic YBaI<sub>2</sub> at different physical conditions  
*P.K. Yadawa, R. R. Yadav*  
S.05 Wednesday 5th - 17:00 - Room R-204
- ULT-17-008. Comparison between the methods of the norm L<sub>1</sub>, L<sub>2</sub>, hilbert transform and phase analysis to obtain the time of flight of ultrasonic signals  
*Castellanos, Luis; Vera, Arturo; Ramos, Antonio; Rodríguez, Miguel; Leija, Lorenzo*  
S.05 Wednesday 5th - 17:20 - Room R-204
- ULT-17-009. Ultrasound characterization of energetic materials  
*Cobb, W. N.*  
S.05 Wednesday 5th - 17:40 - Room R-204
- ULT-17-010. Comparison of experimental results and numerical calculations of ultrasonic waves scattering on a model of artery  
*Wojcik, Janusz; Powalowski, Tadeusz; Trawinski, Zbigniew*  
S.08 Friday 7th - 10:00 - Room R-203
- ULT-17-011. Ultrasonic properties of quaternary alloys  
*R.R.Yadav, A.K.Yadav*  
S.08 Friday 7th - 10:20 - Room R-203
- ULT-17-012. Refracto-vibrometry - a convenient method for visualizing ultrasound  
*Zipser, Lothar; Franke, Heinz*  
S.08 Friday 7th - 10:40 - Room R-203
- ULT-17-013. Measurements of the elastic moduli of laminated composites using ultrasonic technique  
*Elhabak, A. M.; Adly, M.; Gharieb, A. Ali*  
S.08 Friday 7th - 11:00 - Room R-203
- ULT-17-014. Modeling and optimisation of an ultrasonic generator  
*Coutard, Frédéric; Schweitzer, Patrick; Tisserand, Etienne*  
S.08 Friday 7th - 11:20 - Room R-203
- ULT-17-015. Detection of delamination defects in carbon fiber using ultrasonic signal processing  
*Abdessalem Benammar, R.Drai, A.Kechida, A.Guessoum*  
S.08 Friday 7th - 11:40 - Room R-203
- ULT-17-016. Tactile displaying method using ultrasonic vibrator for controlling sense of roughness and softness  
*Atsushi, Tazo; Takashi, Maeno*  
Poster - Thursday 6th afternoon - Board 17

- ULT-17-017. Resonance-based acoustic technique applied to the determination of young's modulus in granites  
*Del Río, Luis Mariano; López, Felicísima; Calleja, Beatriz; Tejado, Juan José; Mota, M<sup>a</sup> Isabel; González, Israel; San Emeterio, José Luis; Ramos, Antonio*  
Poster - Thursday 6th afternoon - Board 18
- ULT-17-018. An ultrasound study of concrete hardening in construction pillars  
*Del Río, Luís Mariano; López, Felicísima; Pareja, Consuelo; Calleja, Beatriz*  
Poster - Thursday 6th afternoon - Board 19
- ULT-17-019. Theoretical and experimental study of the ultrasonic propagation in solid polymers  
*Maghlaoui, Nadir; Hakim ,Djelouah ; Tarek, Boutkedjirt*  
Poster - Thursday 6th afternoon - Board 20
- ULT-17-020. Finite-difference time-domain simulation of ultrasonic wave propagations through cancellous bone with various trabecular structures  
*Hosokawa, Atsushi*  
Poster - Thursday 6th afternoon - Board 21
- ULT -17-021. Nondestructive sum frequency vibro-acoustography imaging  
*Mitri, Farid G.; Fatemi, Mostafa*  
Poster - Thursday 6th afternoon - Board 22
- ULT-17-022. Quality control of liquid pigment-based suspensions using ultrasounds  
*Sierra, Carlos; Resa, Pablo; Elvira, Luis*  
Poster - Thursday 6th afternoon - Board 23
- ULT-17-023. Asymmetric collapse process of a bubble adhered to quartz glass; optical observation using high-speed video camera  
*Yoshida, Kenji; Fujikawa, Takaaki; Nakatani, Shintaro;Watanabe, Yoshiaki*  
Poster - Thursday 6th afternoon - Board 24

#### **UNW – Underwater**

##### **UNW-01 – Inversion method in underwater acoustics**

*Session Organizer: Sergio Jesus*

- UNW-01-001-IP. Geoacoustic Inversion in Range dependent Shallow Water Environments  
*Chapman, N. Ross; Jiang, Yongmin*  
S.01 Monday 3rd - 15:00 - Room R-103
- UNW-01-002. Bottom parameters estimation from low frequency signals in shallow water  
*Li, Fenghua; Zhang Renhe*  
S.01 Monday 3rd - 15:20 - Room R-103
- UNW-01-003. Inversion techniques in fish size estimation  
*Moszynski, Marek*  
S.01 Monday 3rd - 15:40 - Room R-103
- UNW-01-004. Acoustic monitoring of environmental variability induced by storm on shelf of the Black Sea: internal bore observation  
*Kuryanov, Boris; Serebryany, Andrey*  
S.01 Monday 3rd - 16:00 - Room R-103
- UNW-01-005. Sound Intensity in ships noise measuring  
*Eugeniusz Kozaczka; Gra yna Grelowska; Ignacy Gloza*  
S.01 Monday 3rd - 16:20 - Room R-103

##### **UNW-02 – Scattering**

*Session Organizer: Guillermo Gaunaud; Hanson Huang*

- UNW-02-001-IP. New passive non-scattering and absorbing coatings of higher efficiency  
*Bobrovnitskii, Yuri*  
S.01 Monday 3rd - 16:40 - Room R-103

- UNW-02-002. Control of Focused Pulse in Adaptive Time-Reversal Processing  
*Y.H. Byun, J.S.Kim, J.H.Cho*  
S.01 Monday 3rd - 17:00 - Room R-103
- UNW-02-003. Internal solitons in the sea and some acoustic effects caused by them: findings of the last years  
*Serebryany, Andrey; Rybak, Samuil; Galybin, Nikolay; Tarasov, Leonid; Okhrimenko, Nikolay; Aredov, Aleksander*  
S.01 Monday 3rd - 17:20 - Room R-103
- UNW-02-004. Coherence function of a low-frequency sound field in an oceanic waveguide with random inhomogeneities  
*Voronovich, Alexander; Ostashev, Vladimir*  
S.01 Monday 3rd - 17:40 - Room R-103
- UNW-02-005. Relation between aperture diameter and incident angle of underwater acoustic lens  
*Nobuyuki Endoh, Sayuri Matsumoto, Takenobu Tsuchiya, Tetsuo Anada*  
S.02 Tuesday 4th - 09:00 - Room R-103
- UNW-02-006. Numerical application of nonuniform pseudo-spectral time-domain (PSTD) method for acoustic scattering on randomly rough ocean surface  
*Ha, Yonghoon; Lee, Keunhwa; Seong, Woojae; Park, Cheolsoo*  
Poster - Thursday 6th afternoon - Board 25
- UNW-02-007. Acoustic radiation from the extremity of a fluid loaded tube  
*Haumesser, Lionel; Léon, Fernand*  
Poster - Thursday 6th afternoon - Board 26
- UNW-03 – Seafloor characterization, imaging and GIS**  
*Organizer: Andrzej Stepnowski*
- UNW-03-001-IP. Challenges in seafloor characterisation: from point to map  
*Blondel, Philippe*  
S.02 Tuesday 4th - 09:20 - Room R-103
- UNW-03-002-IP. Estimation of sea floor parameters by modal arrival measurements using data from a laboratory experiment  
*Panagiotis Papadakis, Michael Taroudakis*  
S.02 Tuesday 4th - 09:40 - Room R-103
- UNW-03-003. Application of angular dependence of sonar echo features in seafloor characterisation and imaging  
*Lubniewski, Zbigniew; Bikonis, Krzysztof; Chybicki, Andrzej; Stepnowski, Andrzej*  
S.02 Tuesday 4th - 10:00 - Room R-103
- UNW-03-004. Difficulties and opportunities facing the development of an open source approach for seabed habitat classification using acoustic data  
*Noela Sánchez-Carnero, Cristina Bernárdez, Marek Moszyński, Juan Freire*  
S.02 Tuesday 4th - 10:20 - Room R-103
- UNW – General**
- UNW-04-001-IP. Underwater sound propagation modeling under conditions including inhomogeneous current  
*Brecht, Dieter*  
S.02 Tuesday 4th - 10:40 - Room R-103
- UNW-04-002. Numerical analysis of pressure fields of acoustic lens by method of parabolic equation  
*C.P.Chen; T. Tsuchiya; T. Anada; N. Endoh; S. Matsumoto*  
S.02 Tuesday 4th - 11:00 - Room R-103
- UNW-04-003. Correcting subtle environmental measurement errors with BEAR to reduce errors in predicted transmission loss  
*Pflug, Lisa A.; DelBalzo, Donald R.; Rike, Erik R.*  
S.02 Tuesday 4th - 11:20 - Room R-103

- UNW-04-004. Non-standard Grid Structures for Efficient Transmission Loss Calculations with EAGLE  
*DelBalzo, Donald R.; Grant, Kevin P.; Rike, Erik R.; and Pflug, Lisa A.*  
S.02 Tuesday 4th - 11:40 - Room R-103
- UNW-04-005. Tactical Planning with Genetic Algorithms for Multi-static Active Sonobuoy Systems  
*George, Chacko; DelBalzo, Donald R.*  
S.03 Tuesday 4th - 15:00 - Room R-103
- UNW-04-006. On countermeasures to underwater acoustic network  
*Yangze Dong; Pingxiang Liu*  
S.03 Tuesday 4th - 15:20 - Room R-103
- UNW-04-007. Ambient noise near the sea-route  
*Li, Zhenglin; He, Li; Zhang, Renhe; Peng, Zhaohui*  
S.03 Tuesday 4th - 15:40 - Room R-103
- UNW-04-008. An experimental study on measuring and localizing propeller noises behind a body in a cavitation tunnel  
*Park, Cheolsoo; Seol, Hanshin ; Cho, Yongjin*  
S.03 Tuesday 4th - 16:00 - Room R-103
- UNW-04-009. A modal representation of underwater sound propagation by a moving airborne source  
*Peng, Zhaohui; Li, Hui*  
S.03 Tuesday 4th - 16:20 - Room R-103
- UNW-04-010. Phase fluctuations of the sound field due to internal waves in shallow water  
*B.G. Katsnelson; A.V. Tshoidze*  
S.03 Tuesday 4th - 16:40 - Room R-103
- UNW-04-011. Gas void fraction estimation in gassy sand sediment with difference frequency wave method  
*Byoung-Nam, Kim; Suk Wang, Yoon*  
S.03 Tuesday 4th - 17:00 - Room R-103
- UNW-04-012. Reconstruction of low frequency pulse waveform with waveguide invariant and its application  
*Zhang, Renhe; Li, Fenghua*  
S.03 Tuesday 4th - 17:20 - Room R-103
- UNW-04-013. Analysis of characteristics of sound propagation in the Antarctic ocean using ray theory  
*Tsuchiya, Takenobu; Anada, Tetsuo; Matsumoto, Sayuri; Ushio, Shuki; Endoh, Nobuyuki*  
S.03 Tuesday 4th - 17:40 - Room R-103
- UNW-04-014. Acoustic positioning system for underwater neutrino telescopes  
*Ardid, M.; Bou-Cabo, M.; Martínez-Mora, J.A.; Espinosa, V.; Camarena, F.; Ramis, J.; Alba, J.; Sánchez-Morcillo, V.J.; Redondo, J.; Ferri, M.*  
Poster - Thursday 6th afternoon - Board 27
- UNW-04-015. Development of underwater acoustic surveillance system  
*Kuramoto, Kazuoki; Kurashige, Yoshinori; Tanaka, Takahiro; Asada, Akira; Maeda, Fumitaka; Kawashima, Yoshinobu; Nanri, Mitsuhiko; Imai, Ryusuke; Hantani, Kazuhiro*  
Poster - Thursday 6th afternoon - Board 28
- UNW-04-016. Numerical and Experimental Study on the Marine Propeller Noise  
*Seol, Hanshin; Park, Cheolsoo*  
Poster - Thursday 6th afternoon - Board 29
- UNW-04-017. Robust focusing with adaptive time reversal processing in an ocean waveguide  
*Shin, KeeCheol; Kim, DukYung; Park, JinO; Kim, JeaSoo*  
Poster - Thursday 6th afternoon - Board 30

#### 10.4. Noise Policy Workshop “Education in Noise Control Engineering”

Tuesday 4th – Room L-202

##### Morning Session:

- 09.00 Chairs' Opening
- 09.15 France – Etienne Parizet "EDSVS : European grants for Ph.D. students"
- 09.30 Belgium – Gerrit Vermeir "Education in acoustics in an applied building engineering context: a challenging task"
- 09.45 U. K. – Phil Nelson "Acoustical engineering: An ideal first degree"
- 10.00 Turkey – Mehmet Caliskan "Noise control education in developing countries: Turkish experience"
- 10.15 Break
- 10.30 Switzerland – Kurt Eggenschwiler "Education in noise control engineering with the limited support of universities"
- 10.45 Czech Republic – Ondrej Jiricek "Acoustics and noise control education in the Czech Republic"
- 11.00 Ukraine – Oleksandr Zaporozhets "Studies in Environmental Noise Monitoring"
- 11.15 Discussion
- 12.00 Plenary Lecture
- 13.00 Lunch Break

##### Afternoon Session:

- 15.00 Spain – Jordi Romeu "How can the EU Directive boost noise control education in Spain: present situation"
- 15.15 Italy – Luigi Maffei "Post-graduate university education in noise control engineering in Italy"
- 15.30 Sweden – Tor Kihlman "MSc programs in sound and vibration in Sweden"
- 15.45 Finland – Kari Pesonen "Noise control education in Finland"
- 16.00 Norway – Peter Svensson "Education in noise control engineering with a Norwegian flavor"
- 16.15 Break
- 16.30 The Netherlands - Diemer de Vries "Noise control education in The Netherlands: a survey"
- 16.45 Germany – Gerhard Hübner "The Goal of Education in Machinery Acoustics-Quiet Products without Price Increases"
- 17.00 Discussion