2008 ISMA
International Conference on
Noise and Vibration Engineering

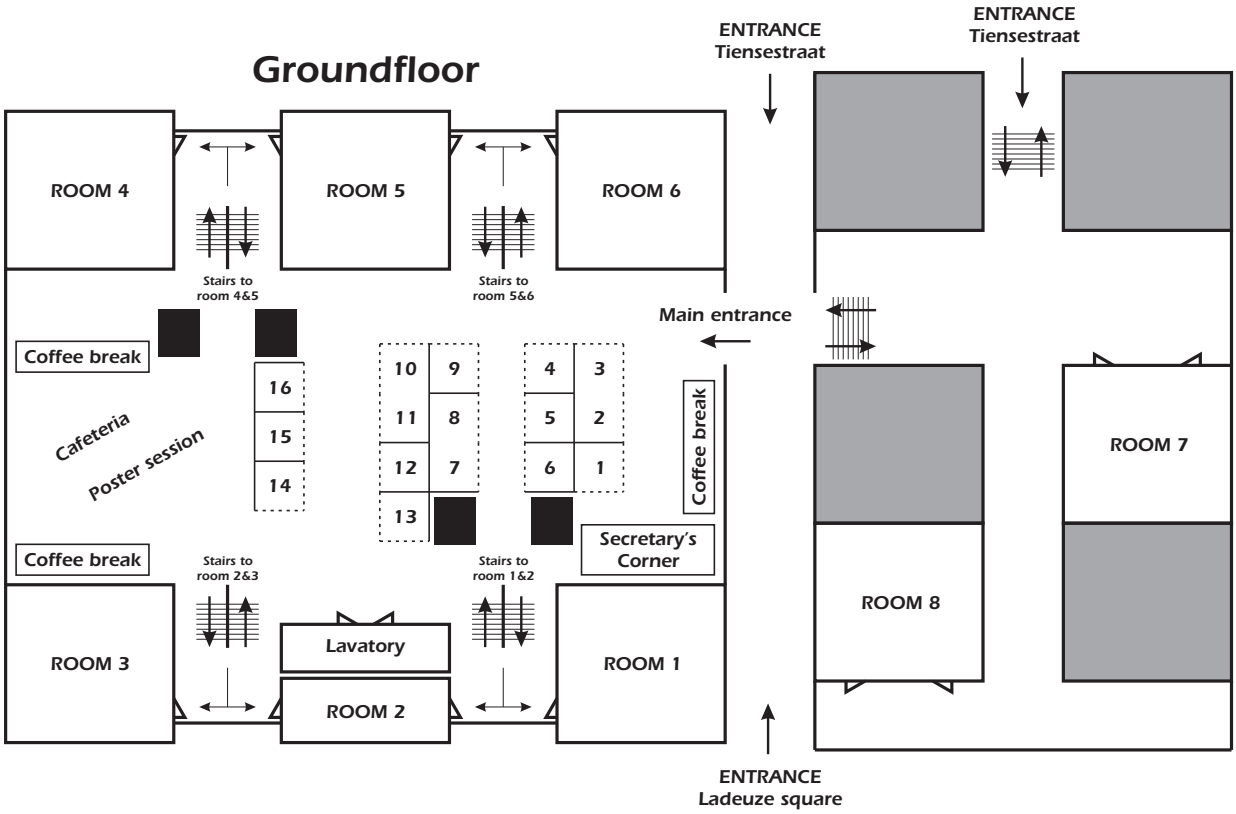
PROGRAM
AND
GENERAL INFORMATION

September 15-17, 2008
Katholieke Universiteit Leuven, Belgium

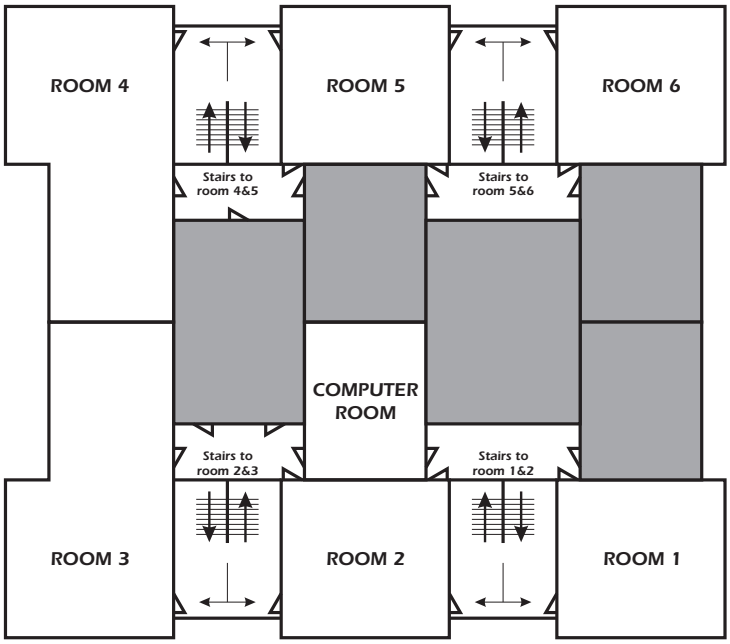
PMA

KATHOLIEKE UNIVERSITEIT
LEUVEN

Groundfloor



2nd Floor



Conference information

The ISMA2008 conference is sponsored and organised by the Division PMA (Production engineering, Machine design and Automation) of the Katholieke Universiteit Leuven.

Organising committee

Paul Sas	Conference chairman	Bert Stallaert	Conference manager
Wim Desmet	Conference program	Peter Kindt	Conference manager
Ward Heylen	Conference program	Gert Heirman	Exhibition
Jan Swevers	Conference program	Karel Vergote	Social events
Dirk Vandepitte	Conference program	Bart Bergen	Conference proceedings

Conference administrator

Mrs. Lieve Notré
Katholieke Universiteit Leuven
Department of Mechanical Engineering, PMA
Celestijnenlaan 300B
B-3001 Heverlee
BELGIUM
Tel (+32) 16 32 24 82 ; Fax (+32) 16 32 29 87
email: lieve.notre@mech.kuleuven.be

Scientific committee

R.J. Allemang (USA)
J.R. Arruda (Br)
F. Augusztinovicz (H)
E. Balmès (F)
T. Bein (D)
J.W. Biermann (D)
D.L. Brown (USA)
J.E Cooper (UK)
J.P. Coyette (B)
W. D'Ambrogio (I)
J. De Baerdemaeker (B)
A. de Boer (NL)
G. Degrande (B)
G. De Roeck (B)
J. De Schutter (B)
S.J. Elliott (UK)
D. Ewins (UK)
S.D. Fassois (GR)
M. Friswell (UK)
P. Gardonio (UK)
L. Gaul (D)
J.-C. Golinval (B)
P. Göransson (S)
D.J Inman (USA)
W. Lauriks (B)
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M. Link (D)
B. Mace (UK)
N.M.M. Maia (P)
J. Mottershead (UK)
N. Niedbal (D)
N. Okubo (J)
G. Pavic (F)
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H. Ramon (B)
B. Randall (AUS)
H. Rice (IRE)
J. Schoukens (B)
A. Sestieri (I)
C. Soize (F)
G. Tomlinson (UK)
G. Vermeir (B)
J. Viñolas Prat (E)
H. Van Brussel
H. Van der Auweraer

Conference objectives

The 2008 Leuven Conference on Noise and Vibration Engineering is held from September 15 to 17 in Leuven, Belgium. It is the 23rd international conference in a series of annual courses and biennial conferences on structural dynamics, modal analysis and noise and vibration engineering, organised by the Department of Mechanical Engineering of the Katholieke Universiteit Leuven. The conference provides a forum for engineers, researchers and other professionals active in the field of modelling, analysing, testing and improving the noise and vibration characteristics of mechanical systems and civil structures. The conference combines expertise in the noise and vibration fields by stressing common measurement, modelling, analysis and control technologies. The meeting provides a further impetus to the cross fertilisation of ideas in both areas.

Conference site

The plenary opening session will be held in auditorium Pieter De Somer. The eight parallel technical sessions and the plenary poster sessions will be held in the new building of College De Valk. The technical exhibition will be organised in the foyer.

Opening session - Registration office on September 15, a.m.

Registration starts at 8.00 on September 15, 2008, at:
Auditorium Pieter De Somer
Deberiotstraat 24
3000 Leuven
Look for the signs ISMA2008.

Conference venue - Registration office on September 15, p.m.

College “De Valk”
Tiensestraat 41
3000 Leuven
Look for the signs ISMA2008.

Conference secretariat

During the conference messages for the participants can be left at the conference secretariat. Telephone number: +32 16 328745 between 8.00 - 12.00 and 14.00 - 18.00. Fax number +32 16 328700. These numbers are only connected during the conference (15-17 September). Before and after the conference, the organisation can be reached at telephone number +32 16 322482 and fax number +32 16 322987.

Course - seminar

In conjunction with the conference, a short course and seminar have been scheduled.

- Intensive course on "Modal Analysis: Theory and Practice" ISMA33, September 18 - 19, 2008.
- Seminar on "Advanced Techniques in Applied and Numerical Acoustics" ISAAC19, September 18 - 19, 2008.

The course and seminar will be organised at the Heverlee campus of K.U.Leuven (Department of Mechanical Engineering). More details can be found on the website http://www.isma-isaac.be

Proceedings

The **CDROM** with the proceedings of ISMA2008 is included in the registration fee. The CDROMs of previous editions of ISMA are available during the conference.

ISMA2006	40 EUR
ISMA23 (1998) – ISMA2004	30 EUR

Name badge

All registrants for ISMA2008, exhibitors, deskstaff and technical staff members will receive a badge. Everybody is asked to wear this badge at all sessions and social events.

Computer facilities

Computers are available to allow participants to check the CDROM proceedings and for e-mail and internet access (room 01.08) from 08.00 till 18.00.

Wireless network

A wireless network is available in the main conference building. An information leaflet on how to access this network can be found in the conference bag.

Switch off your mobile phone

All conference participants are kindly requested to switch off their mobile phone during the presentations.

Coffee breaks and lunches

Mid-morning and afternoon coffee will be served in the exhibition area. Lunch is not included in the registration fee. However a large number of restaurants are located in the surroundings of the conference site within walking distance. People wishing to sample the wide variety of cuisines available have a large number of choices in Leuven and the surroundings. Belgium is world famous for its beers, numbering more than five hundred, and today Leuven is still proud to be known as the beer capital of Belgium.

Conference social event

On Monday evening, September 15 at 19.00, a reception will be organised in the famous fourteenth century University Hall (Jubileumzaal). The University Hall is located near to the conference venue (Naamsestraat 22, 3001 Leuven). All conference participants are invited to attend this event which is sponsored by LMS International and InBev. Don't miss this opportunity to taste some of the typical Belgian specialities.

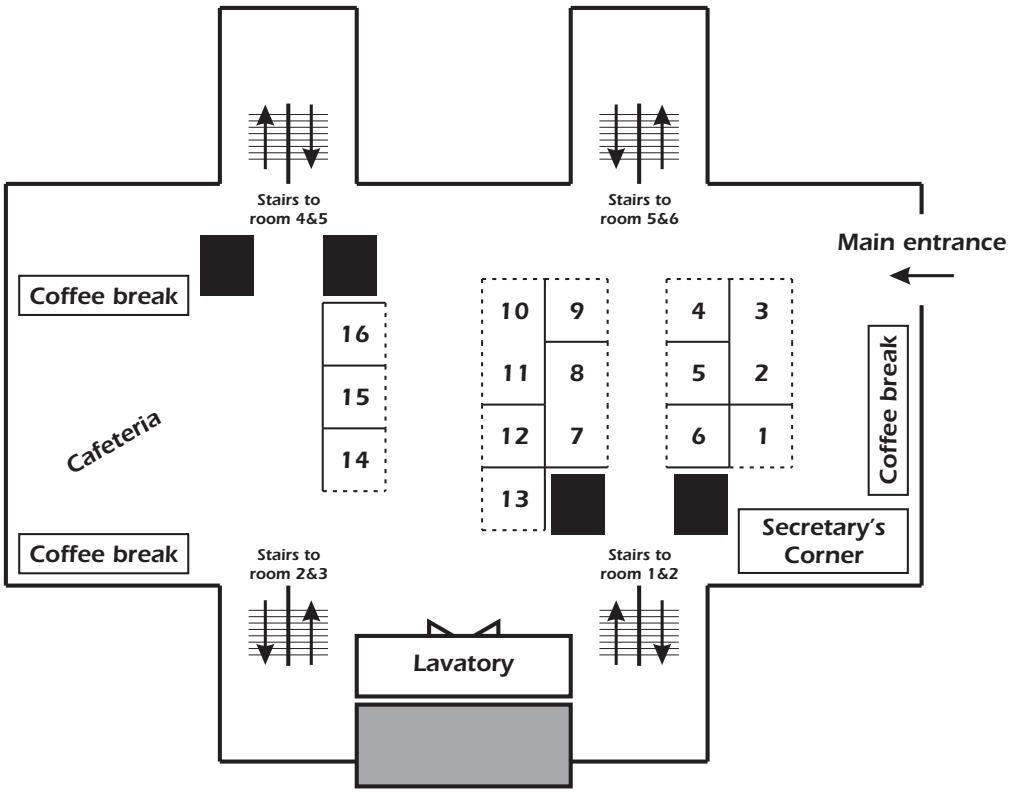
Conference dinner

The dinner will be organised in the Faculty Club (Groot Begijnhof 14 in Leuven, tel: +32 16 329500) on Tuesday evening, September 16, at 19.30. Only participants who have registered for the dinner can participate.

Exhibition

The exhibition is organised in the foyer of the new building of College De Valk. The exhibition will be officially opened after the opening session on Monday, September 15 at 13.00. We would like to emphasise that it is forbidden to park around the College De Valk.

Opening hours: Monday, September 15: 13.00 - 18.25
Tuesday, September 16: 8.50 - 18.35
Wednesday, September 17: 8.50 - 13.00



Booth	Company
1	Microflown Technologies
2-3	LMS International
4	Oros
5	Data Physics Corporation
6	PCB Piezotronics
7-8	Brüel & Kjær
9	National Instruments
10-11	Polytec
12	Free Field Technologies
13	Open Engineering SA
14	Dynamic Design Solutions
15	01dB-MetraVib
16	gfai tech GmbH

Useful hints

Weather
September is late summer in Belgium, with the daily temperatures ranging from 15°C to 20°C, although occasionally the maximum may reach 25°C. On average, the weather is sunny with a few days of rain. An umbrella and a light raincoat are advisable.

Electricity
The electric power is 220 V AC, 50Hz.

Opening hours banks and stores
Banks are generally open from 09.00 till 15.30, department stores from 09.30 till 18.00, while most other shops stay open from 09.00 till 18.00. Mid-day, most shops generally remain open, although you may find a few closed from 12.00 till 14.00. On Fridays, supermarkets and department stores are generally open until 20.00. Money changing after banking hours is possible at the airport.

Credit cards
Shops and restaurants usually accept major international credit cards such as EuroCard-MasterCard, Visa, American Express, Diners Club, with a preference to EuroCard-MasterCard and Visa.

Car rental
If you wish to rent a car, it is often advantageous to do so from your own country, often in conjunction with the purchase of your airline ticket. Local car rental companies are : AVIS, Budget, Car Rental, Hertz, Europcar.
Rules of the road In Belgium, the speed limit on freeways and divided four-lane highways is 120 km/h. On most other roads, it is 70 km/h, but in towns and cities, you are restricted to 50 km/h. Wearing seat and shoulder belts is mandatory for both the driver and passengers. In parts of most towns and cities, you have to pay for parking.

Taxi service
Taxi service in Leuven is available at telephone number: 016/20.20.20 (Taxi Breckpot).

Parking in and near the city centre of Leuven
It is very hard to find a free parking spot in the City centre of Leuven (The maximum length of stay is usually limited to a maximum of 2 hours). Most of the streets in the city centre of Leuven have parking meters and the police and “stadswacht” regularly patrol the streets in order to give out fines to illegally parked cars.
Visitors are therefore advised to park their cars in one of the following:

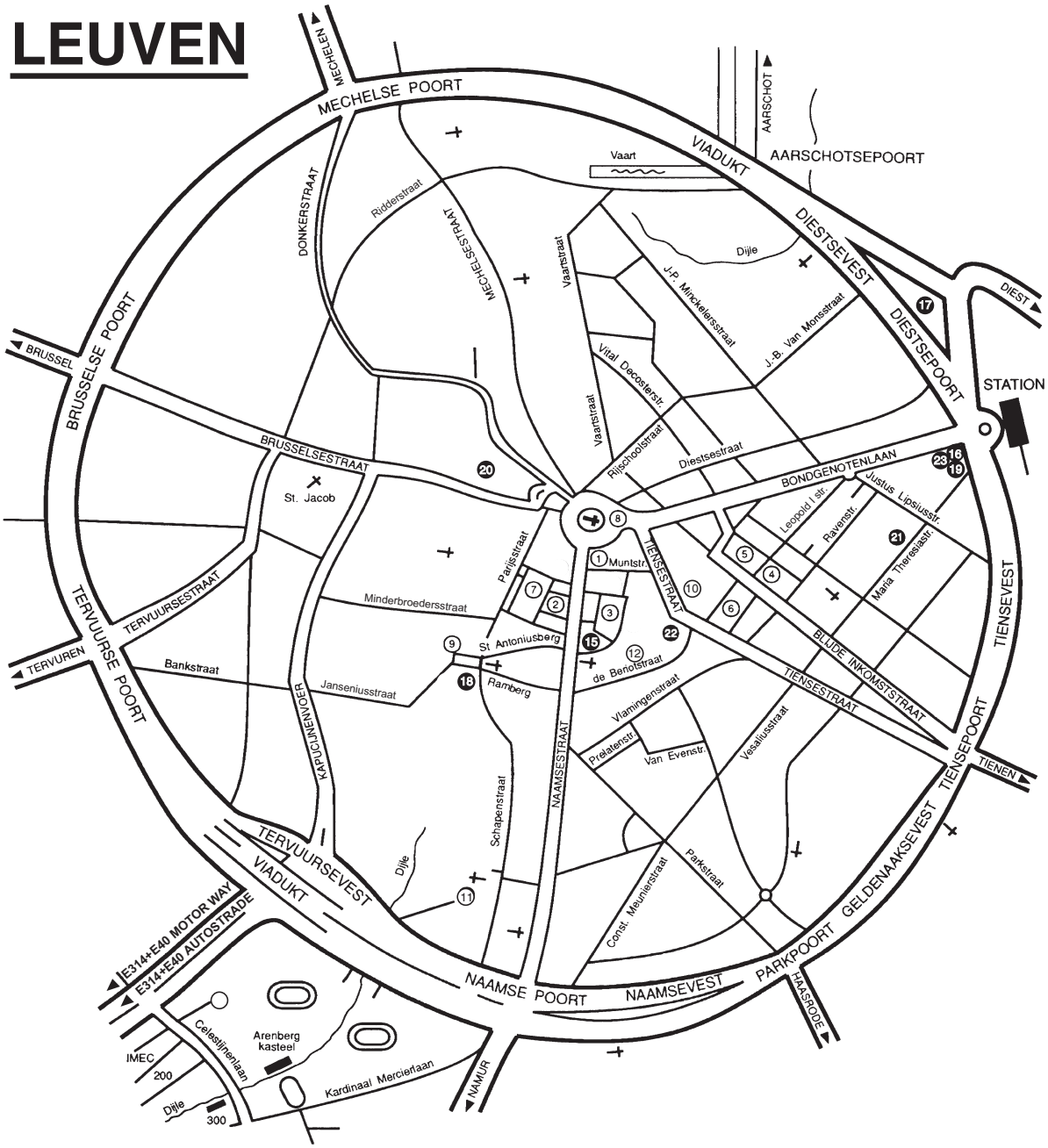
PAYING parking lots (7 days a week, 24 hours a day)

Parking Ladeuze: 740 parking spots, underground
Address: Ladeuzeplein 20, it’s entry is indicated from the “Tiense Poort” onwards
This is just opposite the conference venue

De Bond: 385 parking spots at the railway station, underground
Address: Martelarenplein 18 (entry by way of the tunnel)
10 minutes walk from the conference venue

FREE parking lots **outside of the ring:**

Parking Bodart: 165 parking spots, overground
Address: Veilingweg
30 minutes walk from the conference venue



1. Stadhuis / Town Hall
2. University Hall (Reception)
3. Hogeschoolplein
4. University library
5. Mgr. Ladeuzeplein / Parking
6. Herbert Hooverplein
7. Oude Markt
8. Fochplein
9. Damiaanplein
10. College De Valk (Conference)
11. Faculty Club (Dinner)
12. Auditorium Pieter De Somer (Opening session)

15. Gasthof “De Pastorij”
16. Hotel Mille Colonnes
17. Novotel Leuven Centrum
18. Hotel New Damshire
19. Hotel La Royale
20. Hotel Ibis Leuven Centrum
21. Hotel Binnenhof
22. Hotel Holiday Inn Garden Court
23. Hotel Industrie

Conference schedule

Monday September 15, 2008

8:00 - 11:30 Registration - Auditorium Pieter De Somer (Foyer)
9:20 - 11:30 Opening Session - Auditorium Pieter De Somer
9:30 Conference opening
Marc Vervenne, Rector of the Katholieke Universiteit Leuven
9:45 Introduction to ISMA2008
Paul Sas, Conference Chairman, Katholieke Universiteit Leuven, Belgium
10:00 Keynote lecture
Up-front NVH Engineering - Vision, Challenges and Enablers
Takeshi Abe, Henry Ford Technical Fellow, NVH, Ford Motor Company
10:45 Keynote lecture
Some Thoughts on Adaptive Structures: Design, Control and Technology
André Preumont, Active Structures Laboratory, ULB, Belgium
11:30 - 13:00 Lunch Break
13:00 - 18:25 Technical Sessions - College “De Valk”
13:00 - 18:25 Plenary Poster Sessions - College “De Valk”
13:00 - 18:25 Exhibition - College “De Valk”
19:00 Conference Reception, University Hall (Jubileumzaal)

Tuesday September 16, 2008

8:50 - 12:35 Technical Sessions - College “De Valk”
8:50 - 12:35 Plenary Poster Sessions - College “De Valk”
8:50 - 18:35 Exhibition - College “De Valk”
12:35 - 14:00 Lunch Break
14:00 - 18:35 Technical Sessions - College “De Valk”
14:00 - 18:35 Plenary Poster Sessions - College “De Valk”
19:30 Conference Dinner - Faculty Club

Wednesday September 17, 2008

8:50 - 12:35 Technical Sessions - College “De Valk”
8:50 - 13:00 Exhibition - College “De Valk”
12:35 - 14:00 Lunch Break
14:00 - 15:40 Technical Sessions - College “De Valk”

Technical program

The technical program of ISMA2008 includes two keynote lectures and about 330 technical papers in specialised areas of noise and vibration engineering and structural dynamics. The conference focuses on experimental and numerical analysis methods, with special attention to recent applications in automotive, railway, aerospace and civil engineering. Fields with a strong interaction between noise and vibration behaviour are stressed.

The topics of the technical sessions are:

Active noise control (ANC)
Active vibration control and smart structures (AVC)
Aeroacoustics and flow noise (AA)
Civil applications (CIV)
Condition monitoring (CM)
Damping (D)
Durability testing - vibration control (DT)
Dynamics of rotating machinery (RMD)
EUREKA project FLITE2: System identification for ground and flight vibration testing (FLI)
FRIENDCOPTER project: Rotorcraft noise and vibration (FCOP)
Instrumentation (I)
Medium and high frequency techniques (MHF)
Modal testing: methods and case studies (MT)
Model updating and correlation (MU)
Monitoring and diagnostics of rotating machinery (RMM)
Multi-body dynamics and control (MB)
MYMOSA project: Integrated motorcycle safety (MYM)
Noise control: case studies (NC)
Non-linearities: identification and modelling (NL)
Operational modal analysis (OMA)
Parameter estimation (PE)
Railway dynamics and ground vibrations (RAIL)
Self-excited vibrations (SEV)
Signal processing (SP)
Sound quality engineering (SQE)
Source localisation - Array techniques (ARR)
Structural damage detection (SDD)
Structural dynamics: methods and case studies (SD)
Substructuring and coupling (SC)
Transfer path analysis and source identification (TPA)
Uncertainties in structural dynamics and acoustics (UNC)
Underwater and ship acoustics (UND)
Vehicle noise and vibration (NVH)
Vibro-acoustic modelling and prediction (VAM)

Overview of oral presentations - Monday afternoon

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	MB1 **Multi-body dynamics and control** **Chair: J. De Schutter**	**FLI1** **EUREKA project FLITE2** **Chair: B. Peeters**	**SD1** **Structural dynamics: methods and case studies** **Chair: F. Al-Bender**	**NVH1** **Vehicle noise and vibration** **Chair: T. Abe**
13:00	***J. Peeters*** A need for advanced and validated multibody models as a basis for more...	***B. Peeters*** Improved FRF estimators for MIMO Sine Sweep data	***L. SORIA*** MEMS-based Tuning Fork microgyroscopes: Dynamical response and functional...	***M. Witters*** Identification of NOE models for a continuously variable semi-active damper
13:25	***A. Zanarini*** Kinematics-based variability of the dynamic behaviour in spatial mechanisms	***C. Souty*** Modal identification of the structure of an aircraft with the LSCF method	***F.B. Batista*** Identification of the extensional stiffness matrix of composite materials...	***A.J.H. Schutte*** A Contact Solver Suitable for Finite Elements
13:50	***M. Verschuure*** Optimal counterweight balancing of spatial mechanisms using voxel-based...	***P. Vacher*** Realistic simulation of flutter flight tests	***S.D. Fassois*** Stochastic identification of temperature effects on the dynamics of a smart...	***P. Kindt*** Three-dimensional Ring Model for the Prediction of the Tyre Structural...
14:15	***T. Rosenloecher*** Strategy for User Orientated Simulation of Large Drive Trains to Calculate...	***T. Uhl*** Hardware and software tools for in-flight flutter testing	***A. Placzek*** Evaluation of an Hybrid POD Formulation for Responses under Prescribed...	***H. Maier*** Simulated and measured Influence of Engine Mount Positions and Design on...
14:40	***G. Heirman*** Model reduction techniques to speed up multibody dynamics simulations	***T. De Troyer*** A new frequency-domain flutter speed prediction algorithm using a...	***M.E. EL-KAMALI*** Computation of the free surface of a liquid with surface tension for any...	***P. Badalassi*** Vibro-acoustic analysis and optimization of an engine clutch cover
15:05	***E. Estupinan*** Feasibility of Applying Controllable Lubrication to the Main Bearings of...	***L. Mevel*** Flutter monitoring using a mixed model-based and data-based approach	COFFEE BREAK	COFFEE BREAK
15:30	COFFEE BREAK	***J.E. Cooper*** Development of the Envelope Function for Flight Flutter Testing	***K. Janssens*** Operational Path Analysis: a critical review	***Ch. Meier*** NVH Challenges from tomorrow's Powertrains
15:55	***G. Vermot des Roches*** Time simulation of squeal phenomena in realistic brake models	COFFEE BREAK	***A. Schuhmacher*** Investigation of volume velocity source based on two-microphone method for...	***R.M. Raniolo*** Multi-disciplinary Optimization of a vehicle spot weld layout under...
16:20	***F. CHEVILLOT*** Analysis by wavelet transform of friction induced transient nonlinear...	***E. FOLTETE*** Multiple operational mode shapes normalisation from mass changes	***T. Abe*** Hybrid Simulation Method for Powerplant "In-Vehicle" Noise Source...	***C. Schedlinski*** Computational Model Updating of Structural Damping and Acoustic Absorption...
16:45	***N.D. Sims*** Fuzzy stability analysis of milling processes	***S.D. Fassois*** Non-Stationary Random Vibration Modelling in a Retractable Arm Structure	***H.-H. Priebsch*** Challenges and New Solutions for Transfer Path Analysis	***Q. Leclere*** Quantification of airborne and structure borne engine noise in a coach...
17:10	***O. Kirillov*** Subcritical flutter in the acoustics of friction of the spinning...	***R.B. Randall*** New cepstral methods of operational modal analysis	***K. Janssens*** A novel path contribution analysis method for test-based NVH troubleshooting	***A.L. Guzzomi*** "Powertrains are lightly damped" - fact or friction
17:35	***N. Abdul Razak*** Transonic Limit Cycle Oscillation Prediction From Simulated In-Flight Data	***C. Devriendt*** Automated operational modal analysis using transmissibility functions	***S. Kobayashi*** Identification of Excitation Force by Apparent-Mass Matrix Approach	***S. Donders*** CAE Technologies for Efficient Vibro-Acoustic Vehicle Design Modification...
18:00		***K. Saeed*** Operational Modal Analysis using Output-only Subspace Identification for...		
	SEV1 **Self-excited vibrations** **Chair: J.E. Cooper**	**OMA1** **Operational modal analysis** **Chair: P. Guillaume**	**TPA1** **Transfer path analysis and source identification** **Chair: H. Vd Auweraer**	**NVH2** **Vehicle noise and vibration** **Chair: L. Hermans**

ROOM 5	ROOM 6	ROOM 7	ROOM 8	
VAM1 **Vibro-acoustic modelling and prediction** **Chair: B. Pluymers**	**ANC1** **Active noise control** **Chair: R. Boonen**	**SDD1** **Structural damage detection** **Chair: C.-P. Fritzen**	**SP1** **Signal processing** **Chair: J.R. Blough**	
J. Monet Descombey Presentation of an Efficient Method for Solving Large Coupled...	***K. Kochan*** Active Noise Control in a semi-closed Aircraft Cabin	***J. Hensman*** Locating acoustic emission sources in complex structures using Gaussian...	***M. Feldman*** Hilbert transform decompositions of vibration: application and practical...	13:00
J.-P. Coyette An enhanced modal approach for random vibro-acoustics	***B. Stallaert*** Filtered-X LMS vs repetitive control for active structural acoustic control...	***C. CEMPEL*** Observation Matrix and its Optimization in Multidimensional Condition...	***K. Veggeberg*** Synchronization Architectures for Dynamic Signal Acquisition	13:25
X. SAGARTZAZU SORAZU Performance-based optimisation method for radiated sound power in a coupled...	***J. Rohlfing*** Active panels under stochastic excitation	***P. Kolakowski*** Time-domain identification of damage in skeletal structures using strain...	***M.W. Trethewey*** Temporal noise source separation by short time coherence output power	13:50
T. Takahashi Study on Interior and Exterior Vibroacoustic Analysis for Launch Sites and...	***M. Redaelli*** Active vibration reduction by means of a low-cost FPGA device	***V. Meruane*** Damage detection on a multi-cracked beam by parallel genetic algorithms...	***J.R. Blough*** Understanding Order Tracking Data and Algorithm Limitations	14:15
M. OUISSE Comparison of Robust CMS Methods for Damped Vibroacoustic Problems	***T. ZIELINSKI*** Active porous composites for wide frequency-range noise absorption	***A. Culla*** Nonlinear numerical model for predicting charge conditions on rolling...	***M. Teimouri Sichani*** Investigating efficiency of time domain curve fitters versus filtering for...	14:40
K. Saito Analysis to acoustic characteristic of Newly developed Core panels Based on...	COFFEE BREAK	***L. Hu*** Online support vector novelty detection algorithm for turbopump of liquid...	COFFEE BREAK	15:05
COFFEE BREAK	***W.J. O'Connor*** Wave-based control of flexible mechanical systems	***M. Brehm*** Comparison of Modal- and Wavelet-Based Damage Indicators	***P. feissel*** Bayesian identification and updating of uncertain modal parameters in the...	15:30
A. Sestieri Complex Envelope Vectorization for the solution of external acoustical...	**TUTORIAL**	COFFEE BREAK	***Ch. Desceliers*** Experimental identification in the ultrasonic range of a mechanical model...	15:55
P. Ragnarsson Efficient Calculation of SEA Input Parameters Using a Wave Based...	***A. Alberdi*** Influence of magneto-sensitive elastomers on the dynamic behaviour of a...	***N. Okubo*** Prediction on Vibration and Electromagnetic Field of Electric Motor for...	***W. Becker*** Bayesian Sensitivity Analysis of a Large Nonlinear Model	16:20
N. TOTARO Extension of SmEdA method to estimate energy repartition into SEA...	***C. Hirunyapruk*** Vibration Control using an Adaptive Tuned Magneto-Rheological Fluid...	***A. Vania*** Influence of bearing loads and operating conditions on steam turbine...	***H. De Gersem*** Deviatoric component modes in an interval component mode synthesis...	16:45
J. Rejlek Wave Based Technique: enrichment of the set of basis functions	***G. Aguirre*** Dynamic stiffness compensation with active aerostatic thrust bearings	***M.H. Ghaffari*** Order and Chaos in a Rotor Bearing System with Unbalance and Clearance	***R. SCIGLIANO*** Numerical assessment of booming noise intra variability through a...	17:10
A. Fregolent Application of DOE to estimate the variability of SEA solution	***Y. Halevi*** Catching the wave - on the relationship between wave based control,...	***K. Ait Sghir*** Detection of Rolling Element Bearing Faults by Using of Instantaneous...	***J. AHMAD*** A Spectral Stochastic Finite Element Method for Modal Analysis of...	17:35
		A. Rohani Bastami Concept of Roughness of Vibration in Rolling Bearings Diagnosis		18:00
MHF1 **Medium and high frequency techniques** **Chair: A. Sestieri**	**AVC1** **Active vibration control and smart structures** **Chair: A. Preumont**	**RMM1** **Monitoring and diagnostics of rotating machinery** **Chair: D. Ewins**	**UNC1** **Uncertainties in structural dynamics and acoustics** **Chair: D. Moens**	

Overview of oral presentations - Tuesday morning

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	MYM1 **MYMOSA project** **Integrated motorcycle safety** **Chair: M. Pierini**	**RAIL1** **Railway dynamics and ground vibrations** **Chair: H. Hunt**	**MTC1** **Modal testing: methods and case studies** **Chair: L. Garibaldi**	**NVH3** **Vehicle noise and vibration** **Chair: Ch. Meier**
08:50	***P. Talaia*** A 3D model of a human for powered two-wheeler vehicles	***S. GUPTA*** A parametric study on countermeasures to mitigate subway traffic induced...	***S. Sommerschuh*** Finite element vibration model validation of optical module and headlamp	***B. Dilworth*** Observation of Ground Effects on Snowmobile Pass-by Noise Testing
09:15	***F. Donida*** Object-Oriented Modelling and Simulation of an ATV	***S. Kraft*** Identification of nonlinear vibrations in railway vehicles including...	***S. Ricci*** Virtual shaker testing: a novel approach for improving vibration test...	***E. Bauzer Medeiros*** An analysis of the relative influence of structure borne and airborne noise...
09:40	***C. Brenna*** Development of a Virtual Rider	***K. Kuo*** Vibration in piled foundations due to trains in underground railway tunnels	***L. Garibaldi*** Experimental modal analysis of an aeronautical engine component	***V. Chaudhari*** Simulations and testing approach for 4WD Powertrain vibration reduction
10:05	***D. Moreno*** MYMOSA - A virtual motorcycle rider for closed-loop simulation of...	***S. FRANCOIS*** A 2.5D finite element - boundary element model for vibration isolating...	***H.K. Kim*** Modal Analysis of a PWR Fuel Rod under Simulated Plant Operation Condition	COFFEE BREAK
10:30	COFFEE BREAK	COFFEE BREAK	COFFEE BREAK	***H.-E. de Bree*** Acoustic absorption measurements of moving structures and under influence...
10:55	***G. Melani*** Simulation of the transient dynamic behaviour of an aircraft gearbox by CMS	***P. Galvín*** Induced vibrations due to High-Speed Trains on ballast and slab tracks	***L. Bregant*** Sine sweep excitation of MDOF systems	***I. Bucher*** Structural dynamics and electromechanical (MEMS) filters
11:20	***M.-H. MOULET*** Parametric study of forces applied to a host structure by a vibratory...	***L. Baeza*** Dynamic model of a railway wheelset for corrugation problem analysis	***S. Maloney*** Experimental Modal Analysis Of The Dynamic Behaviour Of Steelpan Test-notes	***J. Antoni*** Orthogonal 1/n-th octave-band filters: derivation and application to the...
11:45	***J.-M. Lagache*** Modal synthesis using accelerated modal summations	***C. Mares*** Wavelet analysis of a solid vibration due to a load moving along a beam...	***M. Luczak*** Experimental Modal Analysis Of Large Fuselage Panel For Composite...	***R. Boonen*** Calibration of the two microphone transfer function method by determining...
12:10	***A. Sternchüss*** Model reduction applied to multi-stage assemblies of bladed disks	***M. Redaelli*** Investigations on the attenuation of squeal noise from a resilient railway...		***R.N.R. Elliott*** Modal Identification of a Vibrating Ring-based Single-axis Rate Sensor
	SC1 **Substructuring and coupling** **Chair: N. Okubo**	**RAIL2** **Railway dynamics and ground vibrations** **Chair: G. Degrande**	**MTC2** **Modal testing: methods and case studies** **Chair: D.L. Brown**	**I1** **Instrumentation** **Chair: W. Heylen**

ROOM 5	ROOM 6	ROOM 7	ROOM 8	
MHF21 **Medium and high frequency techniques** **Chair: H.-H. Priebsch**	**AVC2** **Active vibration control and smart structures** **Chair: D.J. Inman**	**SDD2** **Structural damage detection** **Chair: J. Mottershead**	**UNC2** **Uncertainties in structural dynamics and acoustics** **Chair: P. Lardeur**	
J. Jegorovs Wave Based Method in a complex domain: accuracy improvement	***S. Uosukainen*** Elastic Mass Actuator (EMA) concept for Sound Transmission Loss increase of...	***P. Kraemer*** Sensor Fault Detection and Signal Reconstruction using Mutual Information...	***C. FERNANDEZ*** Identification of a sound-insulation layer modelled by fuzzy structure...	08:50
P. Cermelj Basis Functions and Their Sensitivity in the Wave-Based Substructuring...	***S. Devos*** Active structural acoustic control of rotating machinery using an active...	***E. Papatheou*** Fault induction using added masses for structural damage identification	***O. Giannini*** Interdependency quantification for the 2D-Outputs of fuzzy Systems	09:15
T. Mocsai Investigations on potential improvements of the Wave Based Technique for...	***B. de Marneffe*** Vibration isolation via shunted electromagnetic transducers	***S. Kazemi*** Structural fault identification for a steel plate structure using dynamic...	***L. Farkas*** Reanalysis-based FEM for fuzzy uncertainty treatment in static structural...	09:40
COFFEE BREAK	***S. Garvey*** Vibration Absorption for Quasi-Periodic Excitation - Methods and Two...	COFFEE BREAK	***D. MENGUS*** Structural sensitivity analysis based on a hybrid parametric and...	10:05
B. Van Genechten On the coupling of Wave Based models with modally reduced Finite Element...	COFFEE BREAK	***A. Deraemaeker*** The Smart Bridge demonstrator: description of the experimental setup	COFFEE BREAK	10:30
R. Pirk Implementation of Acoustic Blankets to the VLS Fairing - A Sensitivity...	***O.J. BAKKER*** Investigation into feedback control of part-fixture systems undergoing...	***M. Zehn*** Experimental and Analytical Modal Analysis of Carbon Fibre Reinforced...	***I. Isasa Gabilondo*** Dynamic assessment of a lift cabin design subject to epistemic modelling...	10:55
K. Vergote Application of the Wave Based Method for the calculation of structural...	***Y.P. Xiong*** Power flow mode theory and application to active vibration control of...	***M. Waltering*** Damage assessment of a gradually damaged prestressed concrete bridge using...	***M. KASSEM*** Low- and medium-frequency vibroacoustic analysis of complex structures...	11:20
M. Tadina On the use of an FE based energy flow post-processing method for vehicle...	***G. Silva-Navarro*** A semiactive control scheme using MR dampers for the unbalance response in...	***M. Link*** Computational Model Updating for Damage Identification in the Time Domain	***S.D. Fassois*** Stochastic identification of structural dynamics from multiple experiments...	11:45
	M. Kauba Design and application of an active vibration control system for a marine...	***Z. Ismail*** Application of Local Stiffness Indicator on Finite Element RC Beam Model...	***K. Mendrok*** Assessment of uncertainty of experimentally obtained modal parameters	12:10
MHF3 **Medium and high frequency techniques** **Chair: P. Göransson**	**AVC3** **Active vibration control and smart structures** **Chair: G. Pinte**	**SDD3** **Structural damage detection** **Chair: K. Worden**	**UNC3** **Uncertainties in structural dynamics and acoustics** **Chair: W. D'Ambrogio**	

Overview of oral presentations - Tuesday afternoon

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	MB2 **Multi-body dynamics and control** **Chair: P. Sas**	**CIV1** **Civil applications** **Chair: G. De Roeck**	**MTC3** **Modal testing: methods and case studies** **Chair: T. Uhl**	**PE1** **Parameter estimation** **Chair: D.J. Rixen**
14:00	***C. Pastrav*** A finite element study on the relationship between the vibrational...	***S.F.A.J.G. Zegers*** Design of Lightweight floor system for optimized vibration comfort	***H. Irschik*** An efficient mode based approach for the dynamic analysis of jointed and...	***D.L. Brown*** Historical Review of Spatial Domain Modal Parameter Estimation Procedures
14:25	***A. Rivola*** A Model for the Elastodynamic Analysis of the Geared Timing System of a...	***F. Magalhães*** Permanent monitoring of "Infante D. Henrique" bridge based on FDD and...	***P. Del Turco*** Modal analysis, design optimization and prototype validation of a gas...	***R. Kloepper*** Increased Accuracy of Residual-Inertia-Based Rigid Body Identification...
14:50	***J. Helsen*** The influence of flexibility within multibody modeling of multi-megawatt...	***H. Hunt*** Vibration of bell towers excited by bell ringing - a new approach to...	***A. Urgueira*** Experimental Estimation of FRFs Using the Transmissibility Concept	***J. De Caigny*** Identification of MIMO LPV models based on interpolation
15:15	***J. Rowson*** Shaken baby syndrome: a structural dynamics perspective	***M.G. Mulas*** Vehicle-bridge Interaction Analysis: An Uncoupled Approach	COFFEE BREAK	***C. Valentin*** A Modal Parameter Identification Method for the Elimination of Support...
15:40	***M. Shavravi*** Adaptive Robust Attitude Control of a Finite Element Model of Flexible...	***P. Kusumaningrum*** Numerical Modeling of a Conventional RC Structure and its Response to Blast...	***A. Zanarini*** Fatigue life assessment by means of full-field ESPI vibration measurements	***R.J. Allemang*** Additional Mechanisms for Providing Clear Stabilization (Consistency)...
16:05	COFFEE BREAK	COFFEE BREAK	***X. Chiementin*** Vibratory follow-up from restored RMS values. Application to rolling...	COFFEE BREAK
16:30	***A. Kierkegaard*** Acoustic propagation in a flow duct with an orifice plate	***A. Friedmann*** Engine Excitation for Operational Modal Analysis - Different Approaches...	***K. Ait Sghir*** Diagnosis of milling cutting tools from the excitation identified using...	***F. Petit*** Changing the eigenfrequency spectrum using passive vibration absorbers
16:55	***P. Martinez-Lera*** Robust aeroacoustic computations based on Curle's and Powell's analogies	***M. Böswald*** Taxi Vibration Testing - An Alternative Method to Ground Vibration Testing...	***E. NGUYEN*** Engine combustion indicators from block vibrations using Bayesian...	***N. Roy*** Damping Specification of Automotive Structural Components via Modal...
17:20	***C.J. O'Reilly*** Jet noise shielding: Mean flow convection and refraction effects on jet...	***F. Poncelet*** In-orbit vibration testing of spacecraft structures	***S.H. Song*** Core Barrel Vibration Monitoring of KSNP Using Statistical Reactor Noise...	***B. Titurus*** Model validation and experimentally driven hydraulic damper model...
17:45	***A. Tolstykh*** Highly accurate multioperators schemes for aeroacoustics with application...	***R.J. Allemang*** Modal studies on a truck frame and suspension	***J. Zhu*** Fault detection of marine diesel engine using cylinder head vibration...	***O. Giannini*** Tailored Damping Induced by a Cluster of Resonators
18:10	***X. Sheng*** Applying the boundary element and modal superposition methods to evaluate...	***N.-J. Jacobsen*** Operational Modal Analysis on Structures with Rotating Parts		
	AA1 **Aeroacoustics and flow noise** **Chair: M. Baelmans**	**OMA2** **Operational modal analysis** **Chair: J.-C. Golinval**	**CM1** **Condition monitoring** **Chair: J. Antoni**	**D1** **Damping** **Chair: N.M.M. Maia**

ROOM 5	ROOM 6	ROOM 7	ROOM 8	
VAM2 **Vibro-acoustic modelling and prediction** **Chair: F. Augusztinovicz**	**AVC4** **Active vibration control and smart structures** **Chair: W.J. O'Connor**	**RMD1** **Dynamics of rotating machinery** **Chair: B. Randall**	**UNC4** **Uncertainties in structural dynamics and acoustics** **Chair: D. Vandepitte**	
Y.H. wijnant On solving the Helmholtz equation in terms of amplitude and phase	***Ch.G.R.L Collette*** Energy transfer in semi-active suspension	***N. Bachschmid*** Modelling and Experimental Results of Short Arc Rubs in Rotating Machines	***F. Magionesi*** Time domain energy response of uncertain structures	14:00
W.R. Kampinga A finite element for viscothermal wave propagation	***H. van Tongeren*** Smart antenna arrays on vibrating structures	***D. Botto*** Parametric study of the kinematic behaviour of the underplatform damper and...	***M. De Munck*** An adaptive Kriging based optimisation algorithm for interval and fuzzy FRF...	14:25
B. Van den Nieuwenhof Efficient analysis of large trimmed configurations using modal approaches	***D.J. Inman*** Piezoelectric shunt damping for chatter suppression in machining processes	***J. Ottewill*** Some effects of interactions between forcing and manufacturing errors in...	***W. D'Ambrogio*** Sensitivity of decoupling techniques to uncertainties in the properties	14:50
P.Y. Nkoumou Sound wave propagation modelling in the presence of a noise barrier: a...	***G. Coppotelli*** Vibration Reduction of a Rotorcraft UAV Using PZT Patches	***E. Dikmen*** Modeling of high speed micro rotors in moderate flow confinement	***P. Lardeur*** Application of a Modal Stability Procedure (MSP) to the frequency response...	15:15
COFFEE BREAK	***R. RAMLAN*** Improving the performance of an energy harvesting device using nonlinearity	***A.K. VERMA*** Active balancing technique for online vibration amplitude suppression in...	COFFEE BREAK	15:40
A. Pescetto A cost effective system for light acoustic signature assessment of surface...	COFFEE BREAK	COFFEE BREAK	***S. Frank*** Productivity Enhancement in Full Body Experimental Modal Analysis by...	16:05
M.P. Salio A Coupled DBE/FE Analysis for the Prediction of Propeller Induced Pressure...	***J.A. Ballesteros*** Analysis of the impact noise and airborne noise insulations of a geotextile...	***N. Bachschmid*** Combining Mistuning and Snubbing in Bladed Disks of Turbomachinery	***J. Aerts*** Optical measurement of nonlinear distortions in the vibration of...	16:30
S. Merz Sound Radiation from a Submarine due to Propeller Forces Transmitted via...	***B. Graf*** Frequency-specific parametric studies for the reduction of the sound...	***L. Pesek*** Dynamics of Rotating Blade Disk Identified by Magneto-Kinematic Measuring...	***R. Kruse*** Vibration platform for the calibration of optical sensors	16:55
J.T. Xing Mixed finite element method and applications to dynamic analysis of...	***F. Kolbe*** Silent aircraft toilets - different concepts for reducing the sound...	***U. Werner*** Vibration stability of soft mounted asynchronous machines with flexible...	***D.L. Brown*** Impedance Modeling of Modal Exciters	17:20
L. Gilroy Comparison of AVAST and BASIS-3D Target Strength Predictions	***A.R. Al-Khalidi*** Vibroacoustic Analysis of an MRI Gradient Coil	***S. Delvecchio*** Use of the cyclostationary modelling for the diagnosis of assembly faults...	***P.S. Varoto*** Angular FRF Assessment Using Piezoceramic Bimorphs Applied to Beams and...	17:45
X. Bao Acoustic Modelling of Underwater Communication Links	***Q. Zeng*** System-approach Implementation for Drum Washing Machine Robust Noise Design			18:10
UND1 **Underwater and ship acoustics** **Chair: S. Ivansson**	**NC1** **Noise control: case studies** **Chair: W. Lauriks**	**RMD2** **Dynamics of rotating machinery** **Chair: M. Ellenbroek**	**I2** **Instrumentation** **Chair: L. Bregant**	

Overview of oral presentations - Wednesday morning

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	D2 **Damping** **Chair: A. Carcaterra**	**RAIL3** **Railway dynamics and ground vibrations** **Chair: P. Vanhonacker**	**SD2** **Structural dynamics: methods and case studies** **Chair: H. Van Brussel**	**FCOP1** **FRIENDCOPTER - Rotorcraft noise and vibration** **Chair: A. Vecchio**
08:50	***N.M.M. Maia*** Reflections on the Hysteretic Damping Model	***Ch.G.R.L Collette*** A study of squeal noise on a scaled test bench	***O. Bareille*** Dynamic measurement of structural properties: wave-correlation applied to...	***M. Molica Colella*** Alleviation of helicopter vibrating hub loads through cyclic trailing-edge...
09:15	***M. Ruderman*** Identification and Compensation of Stick-Slip Friction in Harmonic-Drive...	***M. Molodova*** An investigation of the possibility to use axle box acceleration for...	***K. De Moerlooze*** Characterization of tractive, inertial rolling dynamics	***E. Pierro*** Using P-U probes for the experimental vibro-acoustical modal analysis of a...
09:40	***I. Lopez*** Energy dissipation of a friction damper: experimental validation	***S. Jones*** Effect of inclined soil layers on vibration from underground railways	***E. Wood*** Conveying of granular material using a periodically forced oscillator with...	***V. COKONAJ*** Acoustic cavity with Active-Passive Segmented Constrained Layer Damping...
10:05	***K. Dovstam*** Generic FE modelling of linear interface damping in vibrating structures	***J. Talbot*** Lift-Over Crossings as a Solution to Tram-generated Ground-borne Vibration...	***L. Kari*** Wire rope isolators: An experimental inquiry into their structure borne...	***E. Mucchi*** Acoustical signature analysis of a helicopter cabin in steady-state and run...
10:30	COFFEE BREAK	***X. Zheng*** An Idea to Detect the Environmental Vibration Source Caused by Urban Rail...	COFFEE BREAK	***A. Perazzolo*** Helicopter Cabin Noise Reduction: from Available Technologies to...
10:55	***G. Dimitriadis*** Data Clustering for the Identification of the Bifurcation Behaviour in...	COFFEE BREAK	***D.J. Inman*** Thermally Induced Torsional Oscillations of an Inflatable Space Antenna...	COFFEE BREAK
11:20	***D. Hickey*** Higher-Order Spectra (HOS) for Identification of Nonlinear Modal Coupling	***A.T. Johansson*** Increased Controllability in Component Testing using Structural...	***P. Harkness*** Vibration Considerations in the Design of an Ultrasonic Driller/Corer for...	***E. Vigoni*** Active control of helicopter gearbox supports and effects on cabin acoustic...
11:45	***G. Kerschen*** Development of Numerical Algorithms for Practical Computation of Nonlinear...	***F. De Coninck*** Durability Assessment of Lightweight Stainless Steel Exhaust Systems	***A. Carrella*** Numerical and experimental analysis of a square bistable plate	***P. Menounou*** Use of Noise Barriers for Helicopter Noise Mitigation
12:10	***P.W.J.M. Nuij*** Non-parametric identification of Higher Order Sinusoidal Output Describing...	***G. Aglietti*** Analysis of simplified FE models of PCBs exposed to random vibrations		***L. Testa*** Transfer Path Analysis of the Agusta Westland AW-109 performed by means of...
	NL1 **Non-linearities: identification and modelling** **Chair: H. Rice**	**DT1** **Durability testing - vibration control** **Chair: F. De Coninck**	**SD3** **Structural dynamics: methods and case studies** **Chair: S.D. Fassois**	**FCOP2** **FRIENDCOPTER - Rotorcraft noise and vibration** **Chair: A. Vecchio**

ROOM 5	ROOM 6	
MU1 **Model updating and correlation** **Chair: E. Balmès**	**ACV5** **Active vibration control and smart structures** **Chair: J. Swevers**	
J.E. Mottershead Efficient Methods in Stochastic Model Updating	***S. Maier*** Periodic Disturbance Rejection on a Laser Beam Stabilizing System with...	08:50
T. Lauwagie Optimization of the Dynamic Response of a Complete Exhaust System	***J.J. Roseira*** Friction based vibration absorber with application in machine tools	09:15
B. Titurus Regularization for Symmetric and Almost Symmetric Systems in Model Updating	***R. Viguié*** Toward an Optimal Design Procedure of a Nonlinear Vibration Absorber...	09:40
H. Kurt-Elli Blade Model Updating to enable bladed disc mistune assembly response...	***R.L. Teixeira*** Design of Active Damper Controlled by Piezoelectric Stack	10:05
COFFEE BREAK	COFFEE BREAK	10:30
E.L. Capiez-Lernout Robust parametric updating of uncertain finite element models from...	***R. Kirby*** A hybrid numerical method for analysing multi-mode sound propagation in...	10:55
C. Papadimitriou Multi-objective optimization algorithms for finite element model updating	***W. De Roeck*** Experimental acoustic identification of flow noise sources in expansion...	11:20
M.A. Burnett Modal correlation and updating of a vehicle body-in-white	***T. Toulorge*** A 2D Discontinuous Galerkin Method for Aeroacoustics with Curved Boundary...	11:45
Ch. Zang Error localization in an FE model in model updating process using...	***G. Guilloud*** Optimization of hybrid aeroacoustic computations of an industrial confined...	12:10
MU2 **Model updating and correlation** **Chair: M. Link**	**AA2** **Aeroacoustics and flow noise** **Chair: W. De Roeck**	

Overview of oral presentations - Wednesday afternoon

	ROOM 1	ROOM 2	ROOM 3	ROOM 4
	OMA3 **Operational modal analysis** **Chair: R.J. Allemang**	**CIV2** **Civil applications** **Chair: M. Friswell**	**ARR1** **Source localisation - Array techniques** **Chair: F. De Blauwe**	**SQE1** **Sound quality engineering** **Chair: K. Janssens**
14:00	***E. Reynders*** OMAX testing of a bow-string and a stress-ribbon footbridge	***D. Stancioiu*** Dynamics of Multi-Span Continuous Plate Structures Traversed By Moving...	***D. Tcherniak*** Application of decomposition-based technique in NVH source contribution...	***L. de Oliveira*** Adaptive control schemes for engine sound qualityimprovement
14:25	***K. Deckers*** Applicability of low-weight Pneumatic Artificial Muscle Actuators in an...	***C. Rainieri*** Structural and dynamic assessment and model updating of heritage buildings	***T. Basten*** Acoustic eyes, a novel sound source localization and monitoring technique...	***G. Vandernoot*** Predictive modeling of audio quality inside car cabins
14:50	***R. Mariani*** Experimental modal analysis of a ship structure based on the proper...	***P. Van den Broeck*** Measurement and prediction of the pedestrian-induced vibrations of a...	***Y. Isome*** Optimizing the Number of Measurement Points for Noise Source Identification...	***D. Berckmans*** Numerical case-study on the development of acoustic equivalent source...
15:15	***S. Chauhan*** Application of OMA-EMIF Algorithm to Cable Stayed Bridges	***Å. Bolmsvik*** Evaluation of vibration distribution from a full scale measurement in an...		

Multi-body dynamics and control – MB1

Room 1 – Chairman: J. De Schutter

13:00 A need for advanced and validated multibody models as a basis for more accurate dynamic load prediction in multi megawatt wind turbine gearboxes (ID 619)

J. Peeters, S. Goris, F. Vanhollebeke, B. Marrant, W. Meeusen, *Hansen Transmissions, Belgium*

13:25 Kinematics-based variability of the dynamic behaviour in spatial mechanisms (ID 327)

A. Zanarini, *University of Bologna, Italy*

13:50 Optimal counterweight balancing of spatial mechanisms using voxel-based discretizations (ID 64)

M. Verschuure, B. Demeulenaere, E. Aertbeliën, J. Swevers, J. De Schutter, *Katholieke Universiteit Leuven, Belgium*

14:15 Strategy for User Orientated Simulation of Large Drive Trains to Calculate Realistic Load Conditions (ID 139)

B. Schlecht, T. Rosenlöcher, T. Hähnel, *Technische Universität Dresden, Germany*

14:40 Model reduction techniques to speed up multibody dynamics simulations (ID 395)

G. Heirman, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

O. Brüls, *University of Liège, Belgium*

P. Sas, *Katholieke Universiteit Leuven, Belgium*

15:05 Feasibility of Applying Controllable Lubrication to the Main Bearings of Reciprocating Engines (ID 249)

E.A. Estupinan, I.F. Santos, *Technical University of Denmark, Denmark*

Self excited vibrations – SEV1

Room 1 – Chairman: J.E. Cooper

15:55 Time simulation of squeal phenomena in realistic brake models (ID 259)

G. Vermot des Roches, E. Balmès, *SDTools & Ecole Centrale Paris, France*

T. Pasquet, R. Lemaire, *Bosch (Chassis Systems Brakes), France*

16:20 Analysis by wavelet transform of friction induced transient nonlinear vibrations in aircraft braking systems (ID 287)

F. Chevillot, *Ecole Centrale de Lyon & Messier-Bugatti, France*

J.-J. Sinou, *Ecole Centrale de Lyon, France*

N. Hardouin, *Messier-Bugatti, France*

L. Jézéquel, *Ecole Centrale de Lyon, France*

16:45 Fuzzy stability analysis of milling processes (ID 186)

N.D. Sims, G. Manson, *The University of Sheffield, United Kingdom*

B. Mann, *Duke University, United States*

17:10 Subcritical flutter in the acoustics of friction of the spinning rotationally symmetric elastic continua (ID 162)

O.N. Kirillov, *Technische Universitaet Darmstadt, Germany*

17:35 Transonic Limit Cycle Oscillation Prediction From Simulated In-Flight Data (ID 141)

N. Abdul Razak, G. Dimitriadis, *University of Liège, Belgium*

EUREKA project FLITE2: System identification for ground and flight vibration testing – FLI1

Room 2 – Chairman: B. Peeters

13:00 Improved FRF estimators for MIMO Sine Sweep data (ID 91)

S. Orlando, *University of Rome "la Sapienza", Italy*

B. Peeters, *LMS International, Belgium*

G. Coppotelli, *University of Rome "la Sapienza", Italy*

13:25 Modal identification of the structure of an aircraft with the LSCF method (ID 119)

C. Souty, *Dassault Aviation, France*

13:50 Realistic simulation of flutter flight tests (ID 383)

P. Vacher, A. Bucharles, *ONERA, The French Aerospace Lab, France*

14:15 Hardware and software tools for in-flight flutter testing (ID 466)

A. Klepka, T. Uhl, *AGH University of Science and Technology, Poland*

14:40 A new frequency-domain flutter speed prediction algorithm using a simplified linear aeroelastic model (ID 28)

T. De Troyer, *Erasmushogeschool Brussel, Belgium*

R. Zouari, *IRISA/INRIA, France*

P. Guillaume, *Vrije Universiteit Brussel, Belgium*

L. Mevel, *IRISA/INRIA, France*

15:05 Flutter monitoring using a mixed model-based and data-based approach (ID 594)

R. Zouari, *IRISA/INRIA, France*

T. De Troyer, *Erasmushogeschool Brussel, Belgium*

L. Mevel, *IRISA/INRIA, France*

M. Basseville, *IRISA/CNRS, France*

P. Guillaume, *Vrije Universiteit Brussel, Belgium*

15:30 Development of the Envelope Function for Flight Flutter Testing (ID 549)

A.A. Abassi, *University of Manchester, United Kingdom*

J.E. Cooper, *University of Liverpool, United Kingdom*

Operational modal analysis – OMA1

Room 2 – Chairman: P. Guillaume

16:20 Multiple operational mode shapes normalisation from mass changes (ID 37)

E. Foltête, *FEMTO-ST Institute, France*

16:45 Non-Stationary Random Vibration Modelling in a Retractable Arm Structure (ID 132)

M.D. Spiridonakos, S.D. Fassois, *University of Patras, Greece*

17:10 New cepstral methods of operational modal analysis (ID 339)

R.B. Randall, *University of New South Wales, Australia*

17:35 Automated operational modal analysis using transmissibility functions (ID 461)

C. Devriendt, *Vrije Universiteit Brussel, Belgium*

T. De Troyer, *Erasmushogeschool Brussel, Belgium*

G. De Sitter, P. Guillaume, *Vrije Universiteit Brussel, Belgium*

18:00 Operational Modal Analysis using Output-only Subspace Identification for Structural Health Monitoring (ID 146)

K. Saeed, N. Mechbal, G. Coffignal, M. Vergé, *Arts et Metiers ParisTech, France*

Structural dynamics: methods and case studies – SD1

Room 3 – Chairman: F. Al-Bender

13:00 MEMS-based Tuning Fork microgyroscopes: Dynamical response and functional design (ID 343)

L. Soria, *Politecnico di Bari, Italy*

E. Pierro, *DIMeG-Politecnico di Bari, Italy*

G. Carbone, T. Contursi, L. Mangialardi, *Politecnico di Bari, Italy*

13:25 Identification of the extensional stiffness matrix of composite materials using modal analysis and numerical methods (ID 172)

F.B. Batista, E.L. Albuquerque, J.R.F. Arruda, M. Dias Jr., *University of Campinas, Brazil*

13:50 Stochastic identification of temperature effects on the dynamics of a smart composite beam: assessment of multi-model and global approaches (ID 125)

J.D. Hios, S.D. Fassois, *University of Patras, Greece*

14:15 Evaluation of an Hybrid POD Formulation for Responses under Prescribed Displacements (ID 117)

A. Placzek, *ONERA, The French Aerospace Lab & CNAM, France*

D.-M. Tran, *ONERA, The French Aerospace Lab, France*

R. Ohayon, *CNAM, Conservatoire National des Arts et Métiers, France*

14:40 Computation of the free surface of a liquid with surface tension for any tank geometry (ID 113)

M. El-kamali, *ONERA, The French Aerospace Lab & CNAM, France*

J.-S. Schotté, *ONERA, The French Aerospace Lab, France*

R. Ohayon, *CNAM, Conservatoire National des Arts et Métiers, France*

Transfer path analysis and source identification – TPA1

Room 3 – Chairman: H. Van der Auweraer

15:30 Operational Path Analysis: a critical review (ID 402)

K. Janssens, P. Gajdatsy, H. Van der Auweraer, *LMS International, Belgium*

15:55 Investigation of volume velocity source based on two-microphone method for measuring vibro-acoustic transfer functions (ID 412)

A.P. Schuhmacher, *Brüel & Kjær, Sound & Vibration Measurement A/S, Denmark*

16:20 Hybrid Simulation Method for Powerplant “In-Vehicle” Noise Source Quantification (ID 365)

M.J. Felice, T. Abe, *Ford Motor Company, United States*

A. Selmane, D. Von Werne, *LMS International, Belgium*

16:45 Challenges and New Solutions for Transfer Path Analysis (ID 543)

S. Brandl, H.-H. Priebsch, *ACC Acoustic Competence Center, Austria*

F. Brandl, W. Biermayer, *AVL List GmbH, Austria*

R. Höldrich, A. Sontacchi, *IEM Institute of Electronic Music and Acoustics, Austria*

17:10 A novel path contribution analysis method for test-based NVH troubleshooting (ID 403)

K. Janssens, P. Mas, P. Gajdatsy, L. Gielen, H. Van der Auweraer, *LMS International, Belgium*

17:35 Identification of Excitation Force by Apparent-Mass Matrix Approach (ID 281)

S. Kobayashi, T. Yoshimura, *Tokyo Metropolitan University, Japan*

Vehicle noise and vibration (NVH) – NVH1

Room 4 – Chairman: T. Abe

13:00 Identification of NOE models for a continuously variable semi-active damper (ID 427)

M. Witters, J. Swevers, *Katholieke Universiteit Leuven, Belgium*

13:25 A Contact Solver Suitable for Finite Elements (ID 282)

J.H. Schutte, Y.H. Wijnant, A. de Boer, *University of Twente, Netherlands*

13:50 Three-dimensional Ring Model for the Prediction of the Tyre Structural Dynamic Behaviour (ID 473)

P. Kindt, P. Sas, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

14:15 Simulated and measured Influence of Engine Mount Positions and Design on NVH-Behavior (ID 12)

H. Maier, *personal research, Germany*

14:40 Vibro-acoustic analysis and optimization of an engine clutch cover (ID 188)

P. Badalassi, C. Carmignani, P. Forte, *University of Pisa, Italy*

P. Vaccarino, *Piaggio S.p.A., Italy*

Vehicle noise and vibration (NVH) – NVH2

Room 4 – Chairman: L. Hermans

15:30 NVH Challenges from tomorrow's Powertrains (ID 463)

Ch. Meier, *Daimler AG, Germany*

15:55 Multi-disciplinary Optimization of a vehicle spot weld layout under durability and NVH constraints (ID 491)

R. d'Ippolito, *LMS Italiana, Italy*

R. Raniolo, M. Olivero, M. Meneguzzo, V. Puleo, *Centro Ricerche Fiat, Italy*

S. Donders, M. Hack, *LMS International, Germany*

16:20 Computational Model Updating of Structural Damping and Acoustic Absorption for Coupled Fluid-Structure-Analyses of Passenger Cars (ID 492)

C. Schedlinski, F. Wagner, *ICS Engineering GmbH, Germany*

K. Bohnert, *Porsche AG, Germany*

M. Küsel, D. Clasen, *Volkswagen AG, Germany*

C. Stein, *BMW AG, Germany*

C. Glandier, *Daimler AG, Germany*

M. Kaufmann, *Audi AG, Germany*

E.H.G. Tijs, *Microflown Technologies, Netherlands*

16:45 Quantification of airborne and structure borne engine noise in a coach under real operating conditions (ID 16)

Q. Leclère, G. Pavic, *INSA Lyon, France*

L. Bleandonu, S. Greffe, *Irisbus, France*

17:10 "Powertrains are lightly damped" - fact or friction (ID 192)

A.L. Guzzomi, B.J. Stone, *University of Western Australia, Australia*

17:35 CAE Technologies for Efficient Vibro-Acoustic Vehicle Design Modification and Optimization (ID 475)

S. Donders, L. Hermans, E. Nauwelaerts, S. Chojin, *LMS International, Belgium*

B. Pluymers, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

Vibro-acoustic modelling and prediction – VAM1

Room 5 – Chairman: B. Pluymers

13:00 Presentation of an Efficient Method for Solving Large Coupled Vibro-Acoustic Systems including Porous Elastic Components (ID 40)

J. Monet-Descombey, O. Thuong, Ch. Zhang, *Renault S.A.S., France*

M.A. Hamdi, *University of technology of Compiègne, France*

13:25 An enhanced modal approach for random vibro-acoustics (ID 275)

B. Van den Nieuwenhof, G. Lielens, J.-P. Coyette, *Free Field Technologies S.A., Belgium*

13:50 Performance-based optimisation method for radiated sound power in a coupled system (ID 116)

X. Sagartzazu, J.M. Pagalday, *Ikerlan S. Coop., Spain*

L. Hervella-Nieto, *Universidade da Coruña, Spain*

14:15 Study on Interior and Exterior Vibroacoustic Analysis for Launch Sites and Spacecraft (ID 261)

T. Takahashi, K. Murakami, T. Aoyama, *Japan Aerospace Exploration Agency, Japan*

14:40 Comparison of Robust CMS Methods for Damped Vibroacoustic Problems (ID 230)

Q.H. Tran, M. Ouisse, N. Bouhaddi, *FEMTO-ST Institute, France*

15:05 Analysis to acoustic characteristic of Newly developed Core panels Based on Geometric Plane Tilings and Space Fillings (ID 331)

K. Saito, T. Nojima, H. Morimura, I. Hagiwara, *Tokyo Institute of Technology, Japan*

Medium and high frequency techniques – MHF1

Room 5 – Chairman: A. Sestieri

15:55 Complex Envelope Vectorization for the solution of external acoustical problems (ID 36)

O. Giannini, A. Sestieri, *University of Rome "la Sapienza", Italy*

16:20 Efficient Calculation of SEA Input Parameters Using a Wave Based Substructuring Technique (ID 396)

P. Ragnarsson, B. Pluymers, *Katholieke Universiteit Leuven, Belgium*

S. Donders, *LMS International, Belgium*

W. Desmet, *Katholieke Universiteit Leuven, Belgium*

16:45 Extension of SmEdA method to estimate energy repartition into SEA subsystems (ID 175)

N. Totaro, J.-L. Guyader, *INSA Lyon, France*

17:10 Wave Based Technique: enrichment of the set of basis functions (ID 482)

J. Rejlek, *ACC Acoustic Competence Center, Austria*

F. Diwoky, *AVL List GmbH, Austria*

A. Hepberger, *ACC Acoustic Competence Center, Austria*

B. Pluymers, *Katholieke Universiteit Leuven, Belgium*

17:35 Application of DOE to estimate the variability of SEA solution (ID 105)

A. Culla, *University of Rome "la Sapienza", Italy*

W. D'Ambrogio, *Università dell'Aquila, Italy*

A. Fregolent, *University of Rome "la Sapienza", Italy*

Active noise control – ANC1

Room 6 – Chairman: R. Boonen

13:00 Active Noise Control in a semi-closed Aircraft Cabin (ID 71)

K. Kochan, T. Kletschkowski, D. Sachau, *Helmut-Schmidt-University, Germany*

H. Breitbach, *Airbus Deutschland GmbH, Germany*

13:25 Filtered-X LMS vs repetitive control for active structural acoustic control of periodic disturbances (ID 1)

B. Stallaert, *Katholieke Universiteit Leuven, Belgium*

G. Pinte, S. Devos, W. Symens, *Flanders' MECHATRONICS Technology Centre, Belgium*

J. Swevers, P. Sas, *Katholieke Universiteit Leuven, Belgium*

13:50 Active panels under stochastic excitation (ID 88)

J. Rohlfing, P. Gardonio, *University of Southampton, United Kingdom*

14:15 Active vibration reduction by means of a low-cost FPGA device (ID 95)
A. Cigada, S. Manzoni, M. Redaelli, M. Vanali, *Politecnico di Milano, Italy*

14:40 Active porous composites for wide frequency-range noise absorption (ID 467)
T.G. Zielinski, *Institute of Fundamental Technological Research, Poland*

Active vibration control and smart structures – AVC1

Room 6 – Chairman: A. Preumont

15:30 Wave-based control of flexible mechanical systems (ID 436)
W.J. O'Connor, *University College Dublin, Ireland*

16:20 Influence of magneto-sensitive elastomers on the dynamic behaviour of a suspended mass (ID 168)
A. Alberdi, N. Gil-Negrete, F.J. Nieto, I. Puy, *CEIT and Tecnun (University of Navarra), Spain*

16:45 Vibration Control using an Adaptive Tuned Magneto-Rheological Fluid Vibration Absorber (ID 239)
C. Hirunyapruk, B.R. Mace, M.J. Brennen, *University of Southampton, United Kingdom*

17:10 Dynamic stiffness compensation with active aerostatic thrust bearings (ID 393)
G. Aguirre, F. Al-Bender, H. Van Brussel, *Katholieke Universiteit Leuven, Belgium*

17:35 Catching the wave - on the relationship between wave based control, absolute vibration suppression and input shaping (ID 417)
I. Peled, *Technion, Israel*
W.J. O'Connor, *University College Dublin, Ireland*
Y. Halevi, *Technion, Israel*

Structural damage detection – SDD1

Room 7 – Chairman: C.-P. Fritzen

13:00 Locating acoustic emission sources in complex structures using Gaussian processes (ID 56)
J. Hensman, R. Mills, *The University of Sheffield, United Kingdom*
G. Pierce, *University of Strathclyde, United Kingdom*
K. Worden, *The University of Sheffield, United Kingdom*
M. Eaton, *Cardiff University, United Kingdom*

13:25 Observation Matrix and its Optimization in Multidimensional Condition Monitoring - an evolution of the idea - (ID 597)

C. Cempel, *Poznan University of Technology, Poland*

13:50 Time-domain identification of damage in skeletal structures using strain measurements and gradient-based optimization (ID 68)

P. Kolakowski, L. Jankowski, A. Swiercz, M. Wiklo, *Institute of Fundamental Technological Research, Poland*

14:15 Damage detection on a multi-cracked beam by parallel genetic algorithms using modal characteristics (ID 79)

V. Meruane, W. Heylen, *Katholieke Universiteit Leuven, Belgium*

14:40 Nonlinear numerical model for predicting charge conditions on rolling bearings submitted to environmental vibrations (ID 121)

Y. Berthier, *INSA Lyon, France*

A. Culla, *University of Rome "la Sapienza", Italy*

F. Massi, *INSA Lyon, France*

J. Rocchi, *LIEBHERR-AEROSPACE TOULOUSE, France*

15:05 Online support vector novelty detection algorithm for turbopump of liquid rocket engine based on vibration signals (ID 213)

H. Lei, Q. Guojun, H. Niaoqing, *National Univ. of Defense Technology, China*

15:30 Comparison of Modal- and Wavelet-Based Damage Indicators (ID 80)

M. Brehm, V. Zabel, *Bauhaus-University Weimar, Germany*

Monitoring and diagnostics of rotating machinery – RMM1

Room 7 – Chairman: D. Ewins

16:20 Prediction on Vibration and Electromagnetic Field of Electric Motor for Noise Improvement (ID 15)

N. Okubo, H. Narukami, T. Toi, *Chuo University, Japan*

16:45 Influence of bearing loads and operating conditions on steam turbine vibrations (ID 54)

P. Pennacchi, A. Vania, *Politecnico di Milano, Italy*

17:10 Order and Chaos in a Rotor Bearing System with Unbalance and Clearance (ID 260)

M.H. Ghaffari Saadat, *Amirkabir University of Technology, Iran (Islamic Republic of)*

J.M. Hale, *Newcastle University, United Kingdom*

17:35 Detection of Rolling Element Bearing Faults by Using of Instantaneous Frequency (ID 233)

A. Ibrahim, F. Guillet, M. El Badaoui, F. Bonnardot, *Laboratoire d'Analyse des Signaux et des Processus Industriels (LASPI), France*

18:00 Concept of Roughness of Vibration in Rolling Bearings Diagnosis (ID 219)

M. Behzad, A. Rohani Bastami, *Sharif University of Technology, Iran (Islamic Republic of)*

Signal processing – SP1

Room 8 – Chairman: J.R. Blough

13:00 Hilbert transform decompositions of vibration: application and practical recommendations (ID 76)

M. Feldman, *Technion, Israel*

13:25 Synchronization Architectures for Dynamic Signal Acquisition (ID 92)

K. Veggeberg, J. Arnold, *National Instruments, United States*

13:50 Temporal noise source separation by short time coherence output power (ID 251)

M.W. Trethewey, *Penn State University, United States*

14:15 Understanding Order Tracking Data and Algorithm Limitations (ID 596)

J.R. Blough, *Michigan Technological University, United States*

14:40 Investigating efficiency of time domain curve fitters versus filtering for rectification of displacement histories reconstructed from acceleration measurements (ID 593)

M. Teimouri Sichani, *Aalborg University, Denmark*

R. Brincker, *Aalborg University & University of Southern Denmark, Denmark*

Uncertainties in structural dynamics and acoustics – UNC1

Room 8 – Chairman: D. Moens

15:30 Bayesian identification and updating of uncertain modal parameters in the frequency domain (ID 254)

E. Zhang, J. Antoni, P. Feissel, *University of technology of Compiègne, France*

15:55 Experimental identification in the ultrasonic range of a mechanical model for cortical bones (ID 242)

C. Desceliers, C. Soize, *Université Paris-Est, France*

Q. Grimal, M. Talmant, *Université Paris 6, France*

S. Naili, *Université Paris-Est, France*

16:20 Bayesian Sensitivity Analysis of a Large Nonlinear Model (ID 370)

W. Becker, J. Rowson, J. Oakley, *The University of Sheffield, United Kingdom*

A. Yoxall, *Sheffield Hallam University, United Kingdom*

G. Manson, K. Worden, *The University of Sheffield, United Kingdom*

16:45 Deviatoric component modes in an interval component mode synthesis procedure (ID 616)

H. De Gersem, D. Moens, W. Desmet, D. Vandepitte, *Katholieke Universiteit Leuven, Belgium*

17:10 Numerical assessment of booming noise intra variability through a hierarchical approach (ID 411)

R. Scigliano, P. Lardeur, *Renault S.A.S. & Université de Technologie de Compiègne, France*

17:35 A Spectral Stochastic Finite Element Method for Modal Analysis of structures with uncertain materials properties (ID 526)

J. Ahmad, P. Bressolette, A. Chateauneuf, *LaMI, UBP & IFMA, France*

Poster session – POS1

Coffee break area

13:00 Viscoelastic Materials for the Attenuation of the Vibrations Produced by Fitness Vibration Machines (ID 429)

J. Segura Alcaraz, J.M. Gadea Borrell, E. Juliá Sanchis, *Polytechnic University of Valencia, Spain*

M. Roncaglia, *PEMARSA, S.A., Spain*

13:00 Gear spall detection by non-stationary vibration signal analysis (ID 611)

G. D'Elia, *Universita' degli Studi di Ferrara, Italy*

S. Delvecchio, *Katholieke Universiteit Leuven & Universita' degli Studi di Ferrara, Italy*

G. Dalpiaz, *Universita' degli Studi di Ferrara, Italy*

13:00 Investigation of dynamics and reliability of rubber segments for resilent wheel (ID 385)

L. Pešek, L. Pust, M. Balda, F. Vaněk, J. Svoboda, P. Procházka, *AS CR Institute of Thermomechanics, Czech Republic*

B. Marvalová, *Technical University of Liberec, Czech Republic*

13:00 Experimental Characterisation of Dry and LubricatedFriction on a Newly Developed Rotational Tribometer forMacroscopic Measurements (ID 394)

T. Janssens, F. Al-Bender, H. Van Brussel, *Katholieke Universiteit Leuven, Belgium*

13:00 Vibration damping in polymer matrix composite systems (ID 410)

D. Kroisová, *Technical University of Liberec, Czech Republic*

13:00 Acoustic signal processing and analysis for the byside monitoring station (ID 511)

J. Dybala, Sz. Gontarz, S. Radkowski, *Warsaw University of Technology, Poland*

13:00 Response of uncertain coupled vibrating structures by interval analysis (ID 514)

S. Gabriele, *University "Roma Tre", Italy*

A. Culla, *University of Rome "la Sapienza", Italy*

G. Formica, *University "Roma Tre", Italy*

13:00 Active Control of Lateral Vibration for Bogie Using Variable Structure Model Reference Adaptive Control (ID 534)

A. Karami Mohamadi, N. Al-e-Ali, *Shahrood University of Technology, Iran (Islamic Republic of)*

13:00 Disturbance attenuation of uncertain beams (ID 114)

A. Kyprianou, *University of Cyprus, Cyprus*

C. Mares, *Brunel University, United Kingdom*

13:00 Efficient Acoustic Optimization Using Perturbation Method with Complementary Term (ID 127)

T. Terane, I. Hagiwara, *Tokyo Institute of Technology, Japan*

13:00 The dynamic response of structures with bounded uncertainties (ID 128)

Y. Xia, *Beijing University of Aeronautics and Astronautics & University of Bristol, China*

Z. Qiu, *Beijing University of Aeronautics and Astronautics, China*

M.I. Friswell, *University of Bristol, United Kingdom*

13:00 Two-directions Vibration Control Using an Impact Damper system (ID 220)

T. Nagashima, T. Sato, *Tokyo Denki University, Japan*

K. Tanaka, *Saitama University, Japan*

13:00 Vibration control of high-speed railway bridges using viscoelastic dampers modelled by means of fractional derivatives (ID 302)

E. Moliner, *Jaume I University, Spain*

P. Museros, *Universidad de Granada, Spain*

M.D. Martínez-Rodrigo, *Jaume I University, Spain*

13:00 Passive energy dissipation systems applied to High-Speed railway bridges: a modal approach (ID 324)

M.D. Martínez-Rodrigo, A. Domenech, *Jaume I University, Spain*

J. Lavado, *University of Granada, Spain*

J. Nasarre, *Foundation "Caminos de Hierro", Spain*

MYMOSA project: Integrated motorcycle safety – MYM1

Room 1 – Chairman: M. Pierini

8:50 A 3D model of a human for powered two-wheeler vehicles (ID 524)

P. Talaia, *University of West Bohemia, Czech Republic*

D. Moreno, *LMS International, Belgium*

M. Hajzman, L. Hyncik, *University of West Bohemia, Czech Republic*

9:15 Object-Oriented Modelling and Simulation of an ATV (ID 604)

F. Donida, G. Ferretti, G. Magnani, M. Zampini, *Politecnico di Milano, Italy*

9:40 Development of a Virtual Rider (ID 608)

M. Pierini, N. Baldanzini, C. Brenna, *Università degli Studi di Firenze, Italy*

I. Symeonidis, E. Schuller, S. Peldschus, *Ludwig-Maximilians-Universität, Germany*

10:05 MYMOSA - A virtual motorcycle rider for closed-loop simulation of motorcycles (ID 609)

D. Moreno, *LMS International, Belgium*

P. Talaia, *University of West Bohemia, Czech Republic*

J. De Cuyper, *LMS International, Belgium*

M.S. Lozano, *Universidad Miguel Hernández, Spain*

Substructuring and coupling – SC1

Room 1 – Chairman: N. Okubo

10:55 Simulation of the transient dynamic behaviour of an aircraft gearbox by CMS (ID 187)

G. Melani, C. Carmignani, S. Celi, P. Forte, *University of Pisa, Italy*

G. Di Carlo, *AVIO S.p.A., Italy*

11:20 Parametric study of forces applied to a host structure by a vibratory component (ID 264)

V. Martin, *CNRS, France*

S. Mapagha, M.-H. Moulet, *CEVAA, France*

11:45 Modal synthesis using accelerated modal summations (ID 273)

J.-M. Lagache, *PSA Peugeot Citroën, France*

S. Assaf, *Ecole Supérieure des Techniques Aéronautiques et de Construction Automobile, France*

O. Sauvage, *PSA Peugeot Citroën, France*

12:10 Model reduction applied to multi-stage assemblies of bladed disks (ID 292)

A. Sternchüss, *Ecole Centrale Paris, France*

E. Balmès, *SDTools & Ecole Centrale Paris, France*

P. Jean, J.-P. Lombard, *Snecma (Safran Group), France*

Multi-body dynamics and control – MB2

Room 1 – Chairman: P. Sas

14:00 A finite element study on the relationship between the vibrational behaviour of the hip stem-femur system and the contact area change at the implant-bone interface (ID 297)

L.C. Pastrav, A.G. Asiminei, J. Devos, G. Van der Perre, S.V.N. Jaecques, *Katholieke Universiteit Leuven, Belgium*

14:25 A Model for the Elastodynamic Analysis of the Geared Timing System of a Motorbike Engine (ID 163)

A. Rivola, M. Milandri, *DIEM, University of Bologna, Italy*

E. Mucchi, *Universita' degli Studi di Ferrara, Italy*

14:50 The influence of flexibility within multibody modeling of multi-megawatt wind turbine gearboxes (ID 401)

J. Helsen, G. Heirman, D. Vandepitte, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

15:15 Shaken baby syndrome: a structural dynamics perspective (ID 500)

J. Cheng, D. Batterbee, *The University of Sheffield, United Kingdom*

A. Yoxall, *Sheffield Hallam University, United Kingdom*

N.D. Sims, J. Rowson, I. C. Howard, *The University of Sheffield, United Kingdom*

15:40 Adaptive Robust Attitude Control of a Finite Element Model of Flexible Spacecraft (ID 63)

M. Shahravi, M. Kabganian, *Amirkabir University of Technology, Iran (Islamic Republic of)*

Aeroacoustics and flow noise – AA1

Room 1 – Chairman: M. Baelmans

16:30 Acoustic propagation in a flow duct with an orifice plate (ID 169)

A. Kierkegaard, G. Efraimsson, S. Boij, *KTH, Sweden*

16:55 Robust aeroacoustic computations based on Curle's and Powell's analogies (ID 509)

P. Martinez-Lera, *LMS International, Belgium*

A. Mueller, *von Karman Institute for Fluid Dynamics, Belgium*

C. Schram, *LMS International, Belgium*

P. Rambaud, *von Karman Institute for Fluid Dynamics, Belgium*

W. Desmet, *Katholieke Universiteit Leuven, Belgium*

J. Anthoine, *von Karman Institute for Fluid Dynamics, Belgium*

17:20 Jet noise shielding: Mean flow convection and refraction effects on jet noise source propagation (ID 442)

C.J. O'Reilly, H.J. Rice, *Trinity College, Ireland*

17:45 Highly accurate multioperators schemes for aeroacoustics with application to noise generated by jets (ID 420)

A.I. Tolstykh, M.V. Lipavskii, A.D. Savel'ev, D.A. Shirobokov, *Computing Center of Russian Academy of Sciences, Russian Federation*

18:10 Applying the boundary element and modal superposition methods to evaluate inlet noise of high circumferential orders (ID 600)

X. Sheng, *Cummins Turbo Technologies Co. Ltd, United Kingdom*

Railway dynamics and ground vibrations – RAIL1

Room 2 – Chairman: H. Hunt

8:50 A parametric study on countermeasures to mitigate subway traffic induced vibration and noise in buildings (ID 345)

P. Fiala, *Budapest University of Technology and Economics, Hungary*

S. Gupta, G. Degrande, *Katholieke Universiteit Leuven, Belgium*

F. Augusztinovicz, *Budapest University of Technology and Economics, Hungary*

9:15 Identification of nonlinear vibrations in railway vehicles including considerations of track defects (ID 349)

S. Kraft, C. Fünfschilling, *SNCF, France*

G. Puel, D. Aubry, *MSSMat Laboratory (Ecole Centrale Paris/CNRS), France*

9:40 Vibration in piled foundations due to trains in underground railway tunnels (ID 450)

K.A. Kuo, H. Hunt, *Cambridge University, United Kingdom*

10:05 A 2.5D finite element - boundary element model for vibration isolating screens (ID 366)

S. François, M. Schevenels, G. Degrande, J. Borgions, B. Thyssen, *Katholieke Universiteit Leuven, Belgium*

Railway dynamics and ground vibrations – RAIL2

Room 2 – Chairman: G. Degrande

10:55 Induced vibrations due to High-Speed Trains on ballast and slab tracks (ID 26)

P. Galvín, A. Romero, J. Domínguez, *Universidad de Sevilla, Spain*

11:20 Dynamic model of a railway wheelset for corrugation problem analysis (ID 156)

P. Vila, A. Rovira, J. Fayos, L. Baeza, *Universidad Politécnica de Valencia, Spain*

11:45 Wavelet analysis of a solid vibration due to a load moving along a beam resting on a surface (ID 232)

P. Koziol, C. Mares, I. Esat, *Brunel University, United Kingdom*

12:10 Investigations on the attenuation of squeal noise from a resilient railway wheel by means of piezo-actuators (ID 293)

A. Cigada, *Politecnico di Milano, Italy*

H. Fehren, *ERAS GmbH, Germany*

S. Manzoni, M. Redaelli, *Politecnico di Milano, Italy*

M. Schiedewitz, H. Siebald, *ERAS GmbH, Germany*

Civil applications – CIV1

Room 2 – Chairman: G. De Roeck

14:00 Design of Lightweight floor system for optimized vibration comfort (ID 283)

S.F.A.J.G. Zegers, *Eindhoven University of Technology, Netherlands*

14:25 Permanent monitoring of “Infante D. Henrique” bridge based on FDD and SSI-COV methods (ID 294)

F. Magalhães, A. Cunha, E. Caetano, *Faculty of Engineering of the University of Porto, Portugal*

14:50 Vibration of bell towers excited by bell ringing - a new approach to analysis (ID 458)

R. Smith, H. Hunt, *Cambridge University, United Kingdom*

15:15 Vehicle-bridge Interaction Analysis: An Uncoupled Approach (ID 142)

A. Feriani, *Università di Brescia, Italy*

M.G. Mulas, *Politecnico di Milano, Italy*

G. Lucchini, *Università di Brescia, Italy*

15:40 Numerical Modeling of a Conventional RC Structure and its Response to Blast Loads (ID 591)

K.C.G. Ong, P. Kusumaningrum, *National University of Singapore, Singapore*

Operational modal analysis – OMA2

Room 2 – Chairman: J.-C. Golinval

16:30 Engine Excitation for Operational Modal Analysis - Different Approaches Applied to a Lab Model (ID 180)

A. Friedmann, *Fraunhofer Institute for Structural Durability and System Reliability LBF, Germany*

16:55 Taxi Vibration Testing - An Alternative Method to Ground Vibration Testing of Large Aircraft (ID 479)

M. Böswald, Y. Govers, *Deutsches Zentrum für Luft- und Raumfahrt (DLR), Institute of Aeroelasticity, Germany*

17:20 In-orbit vibration testing of spacecraft structures (ID 301)

F. Poncelet, G. Kerschen, J.-C. Golinval, *University of Liège, Belgium*

17:45 Modal studies on a truck frame and suspension (ID 304)

B. Swaminathan, B. Sharma, R.J. Allemang, *University of Cincinnati, United States*

S. Chauhan, *Brüel & Kjær, Sound & Vibration Measurement A/S, Denmark*

18:10 Operational Modal Analysis on Structures with Rotating Parts (ID 268)

N.-J. Jacobsen, *Brüel & Kjær, Sound & Vibration Measurement A/S, Denmark*

P. Andersen, *Structural Vibration Solutions A/S, Denmark*

Modal testing: methods and case studies – MTC1

Room 3 – Chairman: L. Garibaldi

8:50 Finite element vibration model validation of optical module and headlamp (ID 52)

C. Roucoules, S. Sommerschuh, C. Cros, *Valeo, France*

9:15 Virtual shaker testing: a novel approach for improving vibration test performance (ID 258)

S. Ricci, B. Peeters, J. Debille, L. Britte, E. Faignet, *LMS International, Belgium*

9:40 Experimental modal analysis of an aeronautical engine component (ID 154)

A. Fasana, L. Garibaldi, *Politecnico di Torino, Italy*

M. Giambra, M. Plancher, *AVIO S.p.A., Italy*

S. Marchesiello, *Politecnico di Torino, Italy*

10:05 Modal Analysis of a PWR Fuel Rod under Simulated Plant Operation Condition (ID 375)

H.K. Kim, N.G. Park, S.Y. Jeon, *Korea Nuclear Fuel, Korea, Republic of*

Modal testing: methods and case studies – MTC2

Room 3 – Chairman: D.L. Brown

10:55 Sine sweep excitation of MDOF systems (ID 404)

L. Bregant, *Università degli Studi di Trieste, Italy*

C. Pestelli, *Wartsila Italia Spa, Italy*

D. Granà, *University of Trieste, Italy*

11:20 Experimental Modal Analysis Of The Dynamic Behaviour Of Steelpan Test-notes (ID 313)

S.E. Maloney, C.Y. Barlow, J. Woodhouse, *University of Cambridge, United Kingdom*

11:45 Experimental Modal Analysis Of Large Fuselage Panel For Composite Structure: Contact And Non-Contact Measurement (ID 77)

M. Luczak, A. Vecchio, *LMS International, Belgium*

E. Mucchi, *Universita' degli Studi di Ferrara, Italy*

E. Pierro, *DIMeG-Politecnico di Bari, Italy*

Modal testing: methods and case studies – MTC3

Room 3 – Chairman: T. Uhl

14:00 An efficient mode based approach for the dynamic analysis of jointed and locally damped structures: Joint Interface Modes (ID 182)

W. Witteveen, *LCM Linz, Austria*

H. Irschik, *Johannes Kepler University Linz, Austria*

H. Riener, M. Engelbrechtsmüller, *MAGNA Powertrain, ECS St. Valentin, Austria*

A. Plank, *University of Vienna, Austria*

14:25 Modal analysis, design optimization and prototype validation of a gas turbine high pressure blade (ID 202)

P. Del Turco, M. D'Ercole, M. Mariotti, N. Pieroni, F. Gamberi, *GE Infrastructure, Oil & Gas, Italy*

14:50 Experimental Estimation of FRFs Using the Transmissibility Concept (ID 518)

A.P.V. Urgueira, R.A.B. Almeida, *Universidade Nova de Lisboa, Portugal*

N.M.M. Maia, *Technical University of Lisbon, Portugal*

Condition monitoring – CM1

Room 3 – Chairman: J. Antoni

15:40 Fatigue life assessment by means of full-field ESPI vibration measurements (ID 326)

A. Zanarini, *University of Bologna, Italy*

16:05 Vibratory follow-up from restored RMS values. Application to rolling bearings. (ID 98)

X. Chiementin, F. Bolaers, *GRESPI, France*

L. Rasolofondraibe, *CReSTIC, France*

J.-P. Dron, *GRESPI, France*

16:30 Diagnosis of milling cutting tools from the excitation identified using cepstral analysis and second order cyclic statistics (ID 377)

K. Ait sghir, *LASPI & GSCM-LRIT, France*

R.B. Randall, *University of New South Wales, Australia*

M. El Badaoui, F. Guillet, *Laboratoire d'Analyse des Signaux et des Processus Industriels (LASPI), France*

M. Bakrim, *LP2M2E, Morocco*

D. Aboutajdine, *GSCM-LRIT, Morocco*

16:55 Engine combustion indicators from block vibrations using Bayesian inference. (ID 120)

E. Nguyen, L. Duval, O. Grondin, *Institut Français du Pétrole (IFP), France*

J. Antoni, *University of technology of Compiègne, France*

17:20 Core Barrel Vibration Monitoring of KSNP Using Statistical Reactor Noise Descriptors (ID 530)

S.H. Song, *Korea Institute of Nuclear Safety, Korea, Republic of*

17:45 Fault detection of marine diesel engine using cylinder head vibration signals (ID 17)

J. Zhu, *Shanghai Maritime University, China*

Vehicle noise and vibration (NVH) – NVH3

Room 4 – Chairman: Ch. Meier

8:50 Observation of Ground Effects on Snowmobile Pass-by Noise Testing (ID 317)

B. Dilworth, J.R. Blough, *Michigan Technological University, United States*

9:15 An analysis of the relative influence of structure borne and airborne noise into the habitacle of a road vehicle prototype having independent sources (ID 320)

E. Bauzer Medeiros, *Universidade Federal de Minas Gerais, Brazil*

G.P. Guimarães, *Fiat Automóveis S.A., Brazil*

9:40 Simulations and testing approach for 4WD Powertrain vibration reduction (ID 161)

M. Kumbhar, V. Chaudhari, R. Bhagate, *Mahindra & Mahindra Ltd., India*

Instrumentation – I1

Room 4 – Chairman: W. Heylen

10:30 Acoustic absorption measurements of moving structures and under influence of flow (ID 157)

E.H.G. Tijs, *Microflown Technologies, Netherlands*

H.-E. de Bree, *Microflown Technologies & HAN University, Netherlands*

10:55 Structural dynamics and electromechanical (MEMS) filters (ID 130)

I. Bucher, E. Elka, *Technion, Israel*

11:20 Orthogonal 1/n-th octave-band filters: derivation and application to the measurement of instantaneous sound intensity (ID 480)

J. Antoni, *University of technology of Compiègne, France*

11:45 Calibration of the two microphone transfer function method by determining the hard wall impedance at shifted reference sections. (ID 610)

R. Boonen, P. Sas, W. Desmet, W. Lauriks, G. Vermeir, *Katholieke Universiteit Leuven, Belgium*

12:10 Modal Identification of a Vibrating Ring-based Single-axis Rate Sensor (ID 143)

R. Elliott, C.H.J. Fox, S. McWilliam, *The University of Nottingham, United Kingdom*

Parameter estimation – PE1

Room 4 – Chairman: D.J. Rixen

14:00 Historical Review of Spatial Domain Modal Parameter Estimation Procedures (ID 515)

D.L. Brown, R.J. Allemang, *University of Cincinnati, United States*

14:25 Increased Accuracy of Residual-Inertia-Based Rigid Body Identification through Direct Fitting of Inertia Parameters to FRF Data (ID 211)

R. Kloepper, M. Okuma, *Tokyo Institute of Technology, Japan*

14:50 Identification of MIMO LPV models based on interpolation (ID 399)

J. De Caigny, *Katholieke Universiteit Leuven, Belgium*

J.F. Camino, *University of Campinas, Brazil*

J. Swevers, *Katholieke Universiteit Leuven, Belgium*

15:15 A Modal Parameter Identification Method for the Elimination of Support Influences in Experimental Modal Analysis (ID 189)

C.L. Valentin, *Delft University of Technology, Netherlands*

D. de Klerk, *Delft University of Technology & Müller-BBM VAS GmbH, Germany*

D.J. Rixen, *Delft University of Technology, Netherlands*

15:40 Additional Mechanisms for Providing Clear Stabilization (Consistency) Diagrams (ID 517)

A. Phillips, R.J. Allemang, *University of Cincinnati, United States*

Damping – D1

Room 4 – Chairman: N.M.M. Maia

16:30 Changing the eigenfrequency spectrum using passive vibration absorbers (ID 183)

F. Petit, M. Loccufier, D. Aeyels, *Ghent University, Belgium*

16:55 Damping Specification of Automotive Structural Components via Modal Projection (ID 266)

N. Roy, *Top Modal, France*

Z. Abbadi, *PSA Peugeot Citroën, France*

E. Balmès, *SDTools & Ecole Centrale Paris, France*

17:20 Model validation and experimentally driven hydraulic damper model refinement (ID 257)

B. Titurus, N.A.J. Lieven, *University of Bristol, United Kingdom*

17:45 Tailored Damping Induced by a Cluster of Resonators (ID 110)
O. Giannini, A. Carcaterra, *University of Rome "la Sapienza", Italy*

Medium and high frequency techniques – MHF2

Room 5 – Chairman: H.-H. Priebsch

8:50 Wave Based Method in a complex domain: accuracy improvement (ID 444)
J. Jegorovs, J. Mohring, *Fraunhofer ITWM, Germany*

9:15 Basis Functions and Their Sensitivity in the Wave-Based Substructuring Approach (ID 582)
P. Cermelj, *University of Ljubljana, Slovenia*
B. Pluymers, *Katholieke Universiteit Leuven, Belgium*
S. Donders, *LMS International, Belgium*
W. Desmet, *Katholieke Universiteit Leuven, Belgium*
M. Boltezar, *University of Ljubljana, Slovenia*

9:40 Investigations on potential improvements of the Wave Based Technique for the application to radiation problems under anechoic conditions (ID 484)
T. Mocsai, *AVL List GmbH, Austria*
A. Hepberger, *ACC Acoustic Competence Center, Austria*
F. Diwoky, *AVL List GmbH, Austria*
H.-H. Priebsch, *ACC Acoustic Competence Center, Austria*

Medium and high frequency techniques – MHF3

Room 5 – Chairman: P. Göransson

10:30 On the coupling of Wave Based models with modally reduced Finite Element models for 3D interior acoustic analysis (ID 423)
B. Van Genechten, D. Vandepitte, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

10:55 Implementation of Acoustic Blankets to the VLS Fairing - A Sensitivity Analysis Using SEA (ID 97)
R. Pirk, C. d'Andrade Souto, *Institute of Aeronautics and Space, Brazil*

11:20 Application of the Wave Based Method for the calculation of structural intensity and power flow in plates (ID 430)
K. Vergote, D. Vandepitte, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

11:45 On the use of an FE based energy flow post-processing method for vehicle structural dynamic analysis (ID 440)

M. Tadina, *University of Ljubljana, Slovenia*

P. Ragnarsson, B. Pluymers, *Katholieke Universiteit Leuven, Belgium*

S. Donders, *LMS International, Belgium*

W. Desmet, *Katholieke Universiteit Leuven, Belgium*

M. Boltezar, *University of Ljubljana, Slovenia*

Vibro-acoustic modelling and prediction – VAM2

Room 5 – Chairman: F. Augusztinovicz

14:00 On solving the Helmholtz equation in terms of amplitude and phase (ID 253)

Y.H. Wijnant, A. de Boer, *University of Twente, Netherlands*

14:25 A finite element for viscothermal wave propagation (ID 104)

W.R. Kampinga, Y.H. Wijnant, A. de Boer, *University of Twente, Netherlands*

14:50 Efficient analysis of large trimmed configurations using modal approaches (ID 276)

B. Van den Nieuwenhof, G. Lielens, J.-P. Coyette, F. Acher, D. d'Udekem, *Free Field Technologies S.A., Belgium*

15:15 Sound wave propagation modelling in the presence of a noise barrier: a comparison between analytical and numerical solutions (ID 443)

Y. Nkoumou, T. Mertens, Ph. Bouillard, *Université Libre de Bruxelles, Belgium*

Underwater and ship acoustics – UND1

Room 5 – Chairman: S. Ivansson

16:05 A cost effective system for light acoustic signature assessment of surface vessels (ID 428)

A. Pescetto, *CETENA S.p.A., Italy*

O. Pinto, C. Tarditi, *FINCANTIERI, Italy*

16:30 A Coupled DBE/FE Analysis for the Prediction of Propeller Induced Pressure and Vibration on the Ship Hull (ID 497)

C. Annicchiarico, *CETENA S.p.A., Italy*

M.P. Salio, M. Viviani, *University of Genoa, Italy*

16:55 Sound Radiation from a Submarine due to Propeller Forces Transmitted via the Shaft and Fluid to the Hull (ID 536)

R. Kinns, S. Merz, N.J. Kessissoglou, *The University of New South Wales (UNSW), Australia*

17:20 Mixed finite element method and applications to dynamic analysis of fluid-structure interaction systems subject to earthquake, explosion and impact loads (ID 562)

J.T. Xing, Y.P. Xiong, *University of Southampton, United Kingdom*

17:45 Comparison of AVAST and BASIS-3D Target Strength Predictions (ID 586)

L. Gilroy, *DRDC Atlantic, Canada*

R. Gragg, *Naval Research Laboratory, United States*

18:10 Acoustic Modelling of Underwater Communication Links (ID 587)

X. Bao, *Norwegian University of Science and Technology, Norway*

J.M. Hovem, *Norwegian University of Science and Technology & SINTEF-ICT, Norway*

Active vibration control and smart structures – AVC2

Room 6 – Chairman: D.J. Inman

8:50 Elastic Mass Actuator (EMA) concept for Sound Transmission Loss increase of panel like structures (ID 533)

S. Uosukainen, A. Saarinen, K. Sahu, H. Nykänen, *VTT (Technical Research Centre of Finland), Finland*

A. Kelloniemi, *Panphonics Oy, Finland*

9:15 Active structural acoustic control of rotating machinery using an active bearing (ID 185)

S. Devos, *Flanders' MECHATRONICS Technology Centre, Belgium*

B. Stallaert, *Katholieke Universiteit Leuven, Belgium*

G. Pinte, W. Symens, *Flanders' MECHATRONICS Technology Centre, Belgium*

P. Sas, J. Swevers, *Katholieke Universiteit Leuven, Belgium*

9:40 Vibration isolation via shunted electromagnetic transducers (ID 499)

B. de Marneffe, M. Horodinca, A. Preumont, *Université Libre de Bruxelles, Belgium*

10:05 Vibration Absorption for Quasi-Periodic Excitation - Methods and Two Renewable-Energy Applications. (ID 512)

S.D. Garvey, A. Shahaj, *The University of Nottingham, United Kingdom*

Active vibration control and smart structures – AVC3

Room 6 – Chairman: G. Pinte

10:55 Investigation into feedback control of part-fixture systems undergoing dynamic machining forces (ID 452)
O.J. Bakker, A.A. Popov, S.M. Ratchev, *The University of Nottingham, United Kingdom*

11:20 Power flow mode theory and application to active vibration control of equipment mounted on travelling flexible ship excited by waves (ID 607)
Y.P. Xiong, J.T. Xing, *University of Southampton, United Kingdom*

11:45 A semiactive control scheme using MR dampers for the unbalance response in a rotor-bearing system (ID 209)
G. Silva-Navarro, A. Cabrera-Amado, *Centro de Investigacion y de Estudios Avanzados del I.P.N., Mexico*

12:10 Design and application of an active vibration control system for a marine engine mount (ID 178)
M. Kauba, S. Herold, T. Koch, D. Mayer, T. Melz, *Fraunhofer Institute for Structural Durability and System Reliability LBF, Germany*

Active vibration control and smart structures – AVC4

Room 6 – Chairman: W.J. O'Connor

14:00 Energy transfer in semi-active suspension (ID 321)
C. Collette, A. Preumont, *Université Libre de Bruxelles, Belgium*

14:25 Smart antenna arrays on vibrating structures (ID 478)
H. van Tongeren, H. Schippers, G. Vos, R. Houwink, *National Aerospace Laboratory NLR, Netherlands*

14:50 Piezoelectric shunt damping for chatter suppression in machining processes (ID 296)
A. Erturk, D.J. Inman, *Virginia Tech, United States*

15:15 Vibration Reduction of a Rotorcraft UAV Using PZT Patches (ID 122)
G. Coppotelli, A. Agneni, L. Balis Crema, *University of Rome "la Sapienza", Italy*

15:40 Improving the performance of an energy harvesting device using nonlinearity (ID 160)
R. Ramlan, M.J. Brennen, B.R. Mace, *University of Southampton, United Kingdom*

Noise control: case studies – NC1

Room 6 – Chairman: W. Lauriks

16:30 Analysis of the impact noise and airborne noise insulations of a geotextile sheet (ID 43)

J.A. Ballesteros, S. Quintana, M.D. Fernández, I. González, L. Rodriguez, *Universidad de Castilla-La Mancha, Spain*

16:55 Frequency-specific parametric studies for the reduction of the sound radiation of gearbox housings (ID 65)

B. Graf, *Voith Siemens Hydro Power Generation GmbH & Co. KG, Germany*

J. Neher, B. Wender, *University of Applied Sciences of Ulm, Germany*

17:20 Silent aircraft toilets - different concepts for reducing the sound emission (ID 449)

W. Hufenbach, M. Dannemann, F. Kolbe, *Technische Universität Dresden, Germany*

T. Labuhn, R. Klug, *AOA avionics dresden GmbH, Germany*

17:45 Vibroacoustic Analysis of an MRI Gradient Coil (ID 540)

A. Al-Khalidy, R.A. Hedeen, *General Electric Global Research, United States*

18:10 System-approach Implementation for Drum Washing Machine Robust Noise Design (ID 558)

Q. Zeng, H. Wee, D. Choi, *Samsung Electronics, Korea, Republic of*

Structural damage detection – SDD2

Room 7 – Chairman: J. Mottershead

8:50 Sensor Fault Detection and Signal Reconstruction using Mutual Information and Kalman Filters (ID 564)

P. Kraemer, C.-P. Fritzen, *University of Siegen, Germany*

9:15 Fault induction using added masses for structural damage identification (ID 4)

E. Papatheou, R. Barthorpe, K. Worden, G. Manson, *The University of Sheffield, United Kingdom*

9:40 Structural fault identification for a steel plate structure using dynamic properties and compound Neuro-Genetic algorithm (ID 373)

A.R. Rahai, S. Kazemi, A. Fooladi, *Amirkabir University of Technology, Iran (Islamic Republic of)*

Structural damage detection – SDD3

Room 7 – Chairman: K. Worden

10:30 The Smart Bridge demonstrator: description of the experimental setup (ID 288)

A. Deraemaeker, M. El Ouni, I. Romanescu, A. Preumont, *Université Libre de Bruxelles, Belgium*

10:55 Experimental and Analytical Modal Analysis of Carbon Fibre Reinforced Composite Structures (ID 493)

M.W. Zehn, D. Marinkovic, P. v. Löwis, *Technische Universität Berlin, Germany*

11:20 Damage assessment of a gradually damaged prestressed concrete bridge using static load tests and non-linear vibration characteristic (ID 221)

M. Waltering, V. Bungard, S. Maas, A. Zuerbes, D. Waldmann, *Université du Luxembourg, Luxembourg*

G. De Roeck, *Katholieke Universiteit Leuven, Belgium*

11:45 Computational Model Updating for Damage Identification in the Time Domain (ID 547)

M. Link, M. Weiland, *University of Kassel, Germany*

Th. Seckert, *Technical University of Darmstadt, Germany*

12:10 Application of Local Stiffness Indicator on Finite Element RC Beam Model with Multiple Cracks (ID 340)

Z. Ismail, E.H. Lee, L. Sinti, Z. Ibrahim, H.A. Razak, *University of Malaya, Malaysia*

Dynamics of rotating machinery – RMD1

Room 7 – Chairman: B. Randall

14:00 Modelling and Experimental Results of Short Arc Rubs in Rotating Machines (ID 382)

N. Bachschmid, P. Pennacchi, E. Tanzi, *Politecnico di Milano, Italy*

14:25 Parametric study of the kinematic behaviour of the underplatform damper and correlation with experimental data (ID 502)

D. Botto, S. Zucca, S. Pavone, M.M. Gola, *Politecnico di Torino, Italy*

14:50 Some effects of interactions between forcing and manufacturing errors in gear rattle (ID 505)

J.R. Ottewill, S.A. Neild, R.E. Wilson, *University of Bristol, United Kingdom*

15:15 Modeling of high speed micro rotors in moderate flow confinement (ID 115)

E. Dikmen, P.J.M. van der Hoogt, R.G.K.M. Aarts, *University of Twente, Netherlands*

15:40 Active balancing technique for online vibration amplitude suppression in high-speed flexible rotor system using active magnetic bearings (ID 363)

S.C. Srivastava, A.K. Verma, P.H. Chavda, A.K. Wankhede, G. Gouthaman, *Bhabha Atomic Research Centre, India*

Dynamics of rotating machinery – RMD2

Room 7 – Chairman: M.Ellenbroek

16:30 Combining Mistuning and Snubbing in Bladed Disks of Turbomachinery (ID 380)

N. Bachschmid, P. Pennacchi, M. Lurati, *Politecnico di Milano, Italy*

16:55 Dynamics of Rotating Blade Disk Identified by Magneto-Kinematic Measuring System (ID 384)

L. Pešek, F. Vaněk, P. Procházka, P. Vaněk, J. Cibulka, *AS CR Institute of Thermomechanics, Czech Republic*

17:20 Vibration stability of soft mounted asynchronous machines with flexible shafts and sleeve bearings considering electromagnetic effects (ID 225)

U. Werner, *Siemens AG, Germany*

17:45 Use of the cyclostationary modelling for the diagnosis of assembly faults in i.c. engine cold tests (ID 406)

S. Delvecchio, *Katholieke Universiteit Leuven & Universita' degli Studi di Ferrara, Italy*

G. D'Elia, M. Cavallari, G. Dalpiaz, *Universita' degli Studi di Ferrara, Italy*

Uncertainties in structural dynamics and acoustics – UNC2

Room 8 – Chairman: P. Lardeur

8:50 Identification of a sound-insulation layer modelled by fuzzy structure theory - Experimental validation (ID 27)

C. Fernandez, *Université Paris-Est & PSA Peugeot Citroën, France*

C. Soize, *Université Paris-Est, France*

L. Gagliardini, *PSA Peugeot Citroën, France*

9:15 Interdependency quantification for the 2D-Outputs of fuzzy Systems (ID 35)

O. Giannini, *University of Rome "la Sapienza", Italy*

M. Hanss, *University of Stuttgart, Germany*

9:40 Reanalysis-based FEM for fuzzy uncertainty treatment in static structural analysis (ID 617)

L. Farkas, D. Moens, D. Vandepitte, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

10:05 Structural sensitivity analysis based on a hybrid parametric and non-parametric approach (ID 94)

D. Mengus, M. Ouisse, S. Cogan, *FEMTO-ST Institute, France*

X. Lefebvre, *SNECMA Moteurs, France*

Uncertainties in structural dynamics and acoustics – UNC3

Room 8 – Chairman: W. d'Ambrogio

10:55 Dynamic assessment of a lift cabin design subject to epistemic modelling uncertainties (ID 241)

I. Isasa , U. Arteche, *Ikerlan S. Coop., Spain*

M. Tanco, E. Viles, *TECNUN Universidad de Navarra, Spain*

S. Cogan, *FEMTO-ST Institute, France*

D. Moens, *Katholieke Universiteit Leuven, Belgium*

11:20 Low- and medium-frequency vibroacoustic analysis of complex structures using a statistical computational model and an energy density field formulation (ID 90)

M. Kassem, *Université Paris-Est & PSA Peugeot Citroën, France*

C. Soize, *Université Paris-Est, France*

L. Gagliardini, *PSA Peugeot Citroën, France*

11:45 Stochastic identification of structural dynamics from multiple experiments - experimental variability analysis (ID 131)

P.G. Michaelides, S.D. Fassois, *University of Patras, Greece*

12:10 Assessment of uncertainty of experimentally obtained modal parameters (ID 231)

K. Mendrok, L. Pieczonka, T. Uhl, *AGH University of Science and Technology, Poland*

Uncertainties in structural dynamics and acoustics – UNC4

Room 8 – Chairman: D. Vandepitte

14:00 Time domain energy response of uncertain structures (ID 589)

F. Magionesi, *INSEAN, Italy*

A. Carcaterra, *University of Rome "la Sapienza", Italy*

14:25 An adaptive Kriging based optimisation algorithm for interval and fuzzy FRF analysis (ID 615)

M. De Munck, D. Moens, W. Desmet, D. Vandepitte, *Katholieke Universiteit Leuven, Belgium*

14:50 Sensitivity of decoupling techniques to uncertainties in the properties (ID 103)

W. D'Ambrogio, *Università dell'Aquila, Italy*

A. Fregolent, *University of Rome "la Sapienza", Italy*

15:15 Application of a Modal Stability Procedure (MSP) to the frequency response analysis of finite element systems with variability (ID 551)

L. Martini, *University of technology of Compiègne, France*

P. Lardeur, *Renault S.A.S. & University of technology of Compiègne, France*

E. Arnoult, *University of technology of Compiègne, France*

Instrumentation – I2

Room 8 – Chairman: L. Bregant

16:05 Productivity Enhancement in Full Body Experimental Modal Analysis by Automated Non-Contact Vibration Measurement using a Novel Approach of Combining 3D-Scanning Vibrometry with Industrial Robot Technology (ID 387)

S. Frank, M. Schüssler, *Polytec GmbH, Germany*

16:30 Optical measurement of nonlinear distortions in the vibration of acoustically driven mechanical systems (ID 421)

J.R.M. Aerts, J.J.J. Dirckx, *University of Antwerp, Belgium*

R. Pintelon, *Vrije Universiteit Brussel, Belgium*

16:55 Vibration platform for the calibration of optical sensors (ID 454)

R. Kruse, T. Meyer, *Oldenburg University, Germany*

17:20 Impedance Modeling of Modal Exciters (ID 521)

D.L. Brown, *University of Cincinnati, United States*

M.A. Peres, *The Modal Shop, Inc., United States*

17:45 Angular FRF Assessment Using Piezoceramic Bimorphs Applied to Beams and Isotropic Plates (ID 537)

T.R. Cicogna, P.S. Varoto, M.A. Trindade, *University of Sao Paulo-School of Engineering of Sao Carlos, Brazil*

Poster session – POS2

Coffee break area

8:50 Acoustic characterisation of a CPAP device for the treatment of sleep apnoea (ID 434)

E. Piana, M. Fisogni, *Università degli Studi di Brescia, Italy*

8:50 Optimization of Noise Transmission Loss of Damped Sandwich Structures (ID 435)

M. Guerich, *Ecole Supérieure d'Ingénieurs Léonard de Vinci, France*

S. Assaf, *Ecole Supérieure des Techniques Aéronautiques et de Construction Automobile, France*

8:50 Experimental evaluation of sound transmission loss of a double-layered panel containing a fluid (ID 439)

M.J. Mahjoob, B. Yousefzadeh, N. Mohammadi, *University of Tehran, Iran (Islamic Republic of)*

8:50 Modelling and optimization dynamic properties of MRF bearing by using finite element method (ID 445)

W. Klein, A. Mezyk, E. Switonski, *Silesian Technical University, Poland*

8:50 A combined method of transfer matrix and finite element for critical speed of hollow rotor with high rotary speed (ID 30)

L. Ping, Z. Jianli, L. Chengye, W. Fei, *Research Institute of Physical and Chemical Engineering (IPCE), China*

8:50 Comparison of international standards for measuring sound power in earthworks' machines (ID 42)

J.A. Ballesteros, J. Recuero, M.D. Fernández, S. Quintana, I. González, *Universidad de Castilla-La Mancha, Spain*

8:50 Effects of the hot alignment of a power unit on oil-whip instability phenomena (ID 53)

A. Vania, *Politecnico di Milano, Italy*

8:50 Acoustic simulation of building spaces by ray-tracing method: prediction vs. experimental results (ID 85)

M.J. Mahjoob, S. Malakooti, *University of Tehran, Iran (Islamic Republic of)*

8:50 Dynamics of a moving oscillator and a truss structure considering separation and reattachment with impact (ID 108)

L. Baeza, *Universidad Politécnica de Valencia, Spain*

H. Ouyang, *University of Liverpool, United Kingdom*

8:50 Influence of dynamic characteristics of earthquakes to structural response (ID 134)

D. Mestrovic, P. Marijo, *University of Zagreb, Croatia*

8:50 Reduction of Gear Pair Transmission Error with Tooth Profile Modification (ID 286)

R. Tharmakulasingam, G. Alfano, M. Atherton, *Brunel University, United Kingdom*

8:50 Optimization of Child Restraint System with Load Limiter and Airbag using Child FE Human Model in Frontal Crash (ID 303)

T. Koizumi, N. Tsujiuchi, J. Kurumisawa, *Doshisha University, Japan*

8:50 Investigation of dynamic properties of a permanent grandstand using ambient vibration testing (ID 336)

Z. Ibrahim, *University of Malaya, Malaysia*

P. Reynolds, *The University of Sheffield, United Kingdom*

8:50 Modeling and analysis for the vibration of a planetary gear (ID 338)

W. Kim, H. Im, J. Chung, *Hanyang University, Korea, Republic of*

8:50 Reconstructing time-varying wind loads from vibration reponses (ID 381)

E. Lourens, G. Lombaert, G. De Roeck, G. Degrande, *Katholieke Universiteit Leuven, Belgium*

Poster session – POS3

Coffee break area

14:00 Force characterisation of a laser impulse using differential evolution with a local interaction simulation algorithm (ID 555)

A. Spencer, K. Worden, *The University of Sheffield, United Kingdom*

G. Pierce, *University of Strathclyde, United Kingdom*

J. Hensman, D. Chetwynd, Staszewski, *The University of Sheffield, United Kingdom*

14:00 Input Shaper Design for control of Lumped Flexible Systems using Wave Transfer functions (ID 425)

D.J. Mckeown, W.J. O'Connor, *University College Dublin, Ireland*

14:00 A structural design process for reducing structure-borne sound on machinery using SEA (ID 468)

T. Yamazaki, K. Kuroda, S. Ohno, *Kanagawa University, Japan*

14:00 Development of damage diagnosis on a gear tooth surface by using laser beam reflection (ID 486)

E. Tanaka, *Shibaura Institute of Technology, Japan*

K. Nagamura, K. Ikejo, T. Sugiyama, *Hiroshima University, Japan*

R. Nemoto, *Tokyo Metropolitan College of Aeronautical Engineering, Japan*

14:00 Identification of mechanical properties in brushless permanent magnet motors by means of coil impedance measurement (ID 506)

T. Kimpián, F. Augusztinovicz, *Budapest University of Technology and Economics, Hungary*

14:00 Inputshaping: a linear programming approach (ID 553)

L. Van den Broeck, G. Pipeleers, J. De Caigny, B. Demeulenaere, J. Swevers, J. De Schutter, *Katholieke Universiteit Leuven, Belgium*

14:00 A Robust Algorithm to Identify Efficient Driving Points in Experimental Modal Testing (ID 228)

S. Shayan Amin, M. Okuma, K. Yamamoto, *Tokyo Institute of Technology, Japan*

14:00 Application of Genetic Algorithm Optimization Method (GA) In Improvement of a Passenger Car Ride Quality (ID 13)

A. Mohammadpanah, *Automotive Industries Research center of Iran, SAIPA, Iran (Islamic Republic of)*

14:00 Experiments on a Smart Double Panel with Active Dampers for the Control of Sound Transmission (ID 33)

N. Alujevic, P. Gardonio, K.D. Frampton, *University of Southampton, United Kingdom*

14:00 A Component Modal Test Method of Large Space Structures (ID 73)

M. Misawa, A. Ohara, *Shizuoka University, Japan*

14:00 Predictive maintenance of ball bearings for machine rotating with arbitrary velocity profiles (ID 179)

M. Cocconcelli, C. Secchi, R. Rubini, C. Fantuzzi, *University of Modena and Reggio Emilia, Italy*

L. Bassi, *Tetra Pak Packaging Solutions, Italy*

14:00 Structural Optimization of Distributed Actuation System for Improve an Efficiency of Smart Composite Spar Vibration Damping (ID 193)

S. Shevtsov, *South Center of Russian Academy, Russian Federation*

A. Soloviev, S. Bragin, *South Federal University, Russian Federation*

14:00 Adaptive Generation of Eigenmodes for Resonance Systems Using Mutual Entrainment of Nonlinear Oscillator Network (ID 217)

A. Sera, M. Yamakita, *Tokyo Institute of Technology, Japan*

14:00 Damage detection of shear connectors in composite bridges (ID 369)

K. Liu, G. De Roeck, *Katholieke Universiteit Leuven, Belgium*

Damping – D2

Room 1 – Chairman: A. Carcaterra

8:50 Reflections on the Hysteretic Damping Model (ID 280)
N.M.M. Maia, *Technical University of Lisbon, Portugal*

9:15 Identification and Compensation of Stick-Slip Friction in Harmonic-Drive Gear Transmission (ID 489)
M. Ruderman, F. Hoffmann, T. Bertram, *Technische Universitaet Dortmund, Germany*

9:40 Energy dissipation of a friction damper: experimental validation (ID 522)
I. Lopez, C.A. Blok, H. Nijmeijer, *Eindhoven University of Technology, Netherlands*

10:05 Generic FE modelling of linear interface damping in vibrating structures (ID 503)
K. Dovstam, *Dovstam Innovation HB, Sweden*
P. Göransson, *KTH, Sweden*

Non-linearities: identification and modelling – NL1

Room 1 – Chairman: H. Rice

10:55 Data Clustering for the Identification of the Bifurcation Behaviour in Non-Linear Aeroelastic Systems using a Coupled Harmonic Balance/Genetic Algorithm Approach (ID 9)
G.A. Vio, *University of Liverpool, United Kingdom*
G. Dimitriadis, *University of Liège, Belgium*
J.E. Cooper, *University of Liverpool, United Kingdom*

11:20 Higher-Order Spectra (HOS) for Identification of Nonlinear Modal Coupling (ID 22)
D. Hickey, K. Worden, *The University of Sheffield, United Kingdom*

11:45 Development of Numerical Algorithms for Practical Computation of Non-linear Normal Modes (ID 83)
M. Peeters, F. Georgiades, R. Viguié, G. Sérandour, G. Kerschen, J.-C. Golinval, *University of Liège, Belgium*

12:10 Non-parametric identification of Higher Order Sinusoidal Output Describing Functions (ID 124)
P. Nuij, M. Steinbuch, O. Bosgra, *Eindhoven University of Technology, Netherlands*

Operational modal analysis – OMA3

Room 1 – Chairman: R.J. Allemang

14:00 OMAX testing of a bow-string and a stress-ribbon footbridge (ID 372)

E. Reynders, D. Degrauwe, M. Schevenels, G. De Roeck, *Katholieke Universiteit Leuven, Belgium*

P. Van den Broeck, *Katholieke Hogeschool Sint-Lieven, Belgium*

K. Deckers, P. Guillaume, *Vrije Universiteit Brussel, Belgium*

F. Magalhães, E. Caetano, A. Cunha, *Faculty of Engineering of the University of Porto, Portugal*

14:25 Applicability of low-weight Pneumatic Artificial Muscle Actuators in an OMAX framework (ID 448)

K. Deckers, *Vrije Universiteit Brussel, Belgium*

T. De Troyer, *Erasmushogeschool Brussel, Belgium*

E. Reynders, *Katholieke Universiteit Leuven, Belgium*

P. Guillaume, D. Lefeber, *Vrije Universiteit Brussel, Belgium*

G. De Roeck, *Katholieke Universiteit Leuven, Belgium*

14:50 Experimental modal analysis of a ship structure based on the proper orthogonal decomposition (ID 590)

R. Mariani, D. Dessi, *Italian Ship Model Basin, Italy*

15:15 Application of OMA-EMIF Algorithm to Cable Stayed Bridges (ID 204)

S. Chauhan, *Brüel & Kjær, Sound & Vibration Measurement A/S, Denmark*

A.J. Helmicki, V.J. Hunt, J.A. Swanson, J.S. Saini, S. Kangas, *University of Cincinnati, United States*

D.K. Nims, *University of Toledo, United States*

R.J. Allemang, *University of Cincinnati, United States*

Railway dynamics and ground vibrations – RAIL3

Room 2 – Chairman: P. Vanhonacker

8:50 A study of squeal noise on a scaled test bench (ID 322)

C. Collette, E. Iparraguirre, M. Lousberg, *Université Libre de Bruxelles, Belgium*

9:15 An investigation of the possibility to use axle box acceleration for condition monitoring of welds (ID 453)

M. Molodova, Z. Li, *Delft University of Technology, Netherlands*

R. Dollevoet, *ProRail, Netherlands*

9:40 Effect of inclined soil layers on vibration from underground railways (ID 456)

S. Jones, H. Hunt, *Cambridge University, United Kingdom*

10:05 Lift-Over Crossings as a Solution to Tram-generated Ground-borne Vibration and Re-radiated Noise (ID 474)

J.P. Talbot, *Atkins Consultants, United Kingdom*

10:30 An Idea to Detect the Environmental Vibration Source Caused by Urban Rail Traffic (ID 583)

T. Xiaxin, C. Xianmai, *Harbin Institute of Technology, China*

S. Lijing, *Institute of Engineering Mechanics, China*

C. Gaohang, Z. Xin, *Harbin Institute of Technology, China*

Durability testing - vibration control – DT1

Room 2 – Chairman: F. De Coninck

11:20 Increased Controllability in Component Testing using Structural Modifications (ID 308)

A.T. Johansson, T.J.S. Abrahamsson, *Chalmers University of Technology, Sweden*

11:45 Durability Assessment of Lightweight Stainless Steel Exhaust Systems (ID 247)

F. De Coninck, W. Desmet, P. Sas, *Katholieke Universiteit Leuven, Belgium*

E. Hansenne, Y. Van Gucht, B. Lehaen, L. Dedene, *Bosal Research N.V., Belgium*

12:10 Analysis of simplified FE models of PCBs exposed to random vibrations (ID 476)

R.A. Amy, G.S. Aglietti, *University of Southampton, United Kingdom*

G. Richardson, *Surrey Satellite Technology Limited, United Kingdom*

Civil applications – CIV2

Room 2 – Chairman: M. Friswell

14:00 Dynamics of Multi-Span Continuous Plate Structures Traversed By Moving Loads Considering Separation and Reattachment (ID 107)

D. Stancioiu, H. Ouyang, J.E. Mottershead, *University of Liverpool, United Kingdom*

14:25 Structural and dynamic assessment and model updating of heritage buildings (ID 109)

C. Rainieri, G. Fabbrocino, *University of Molise, Italy*

G.M. Verderame, E. Cosenza, G. Manfredi, *University of Naples "Federico II", Italy*

14:50 Measurement and prediction of the pedestrian-induced vibrations of a footbridge (ID 487)

P. Van den Broeck, *Katholieke Hogeschool Sint-Lieven, Belgium*

G. De Roeck, E. Reynders, D. Degrauwe, *Katholieke Universiteit Leuven, Belgium*

I. Bojidarova Georgieva, N. Damyanova Borisova, *University of Architecture, Civil Engineering and Geodesy, Bulgaria*

15:15 Evaluation of vibration distribution from a full scale measurement in an eight storey wooden house (ID 226)

Å. Bolmsvik, *Växjö University, Sweden*

Structural dynamics: methods and case studies – SD2

Room 3 – Chairman: H. Van Brussel

8:50 Dynamic measurement of structural properties: wave-correlation applied to sandwich structures with honeycomb cores (ID 248)

O. Bareille, M. Ichchou, *LTDS, France*

9:15 Characterization of tractive, inertial rolling dynamics (ID 432)

K. De Moerlooze, F. Al-Bender, H. Van Brussel, *Katholieke Universiteit Leuven, Belgium*

9:40 Conveying of granular material using a periodically forced oscillator with dry friction (ID 70)

E. Wood, S. Kaczmarczyk, M. Stonnell, M. Zaid, *University of Northampton, United Kingdom*

R. Hollis, *Arnott Conveyors Ltd, United Kingdom*

10:05 Wire rope isolators: An experimental inquiry into their structure borne sound properties (ID 621)

L. Kari, *Royal Institute of Technology, Sweden*

S. Hägerstrand, *Vibratec Akustikprodukter, Sweden*

Structural dynamics: methods and case studies – SD3

Room 3 – Chairman: S.D. Fassois

10:55 Thermally Induced Torsional Oscillations of an Inflatable Space Antenna Truss (ID 433)

A. Salehian, *University of Waterloo, Canada*

D.J. Inman, *Virginia Tech, United States*

11:20 Vibration Considerations in the Design of an Ultrasonic Driller/Corer for Planetary Rock Sampling (ID 507)

P. Harkness, A. Cardoni, M. Lucas, *University of Glasgow, United Kingdom*

11:45 Numerical and experimental analysis of a square bistable plate (ID 542)
A. Carrella, M.I. Friswell, A. Pirrera, *University of Bristol, United Kingdom*
G.S. Aglietti, *University of Southampton, United Kingdom*

Source localisation - Array techniques – ARR1

Room 3 – Chairman: F. De Blauwe

14:00 Application of decomposition-based technique in NVH source contribution analysis (ID 237)
D. Tcherniak, A.P. Schuhmacher, *Brüel & Kjær, Sound & Vibration Measurement A/S, Denmark*

14:25 Acoustic eyes, a novel sound source localization and monitoring technique with 3D sound probes (ID 144)
T.G.H. Basten, *TNO Science and Industry, Netherlands*
H.-E. de Bree, S. Sadasivan, *Microflown Technologies & HAN University, Netherlands*

14:50 Optimizing the Number of Measurement Points for Noise Source Identification by Inverse Boundary Element Method (ID 246)
T. Koizumi, N. Tsujiuchi, Y. Isome, *Doshisha University, Japan*
H. Uehara, *YANMER Co., LTD., Japan*

FRIENDCOPTER project: Rotorcraft noise and vibration – FCOP1

Room 4 – Chairman: A. Vecchio

8:50 Alleviation of helicopter vibrating hub loads through cyclic trailing-edge blade flap actuation (ID 181)
M. Gennaretti, M. Molica Colella, G. Bernardini, *University Roma Tre, Italy*

9:15 Using P-U probes for the experimental vibro-acoustical modal analysis of a helicopter (ID 277)
E. Pierro, *DIMeG-Politecnico di Bari, Italy*
E. Mucchi, *Universita' degli Studi di Ferrara, Italy*
A. Vecchio, *LMS International, Belgium*

9:40 Acoustic cavity with Active- Passive Segmented Constrained Layer Damping Treated panels (ID 316)
V. Cokonaj, A.A. Llobera, *AERNNOVA Engineering Solutions, Spain*

10:05 Acoustical signature analysis of a helicopter cabin in steady-state and run up operational conditions (ID 362)
E. Mucchi, *Universita' degli Studi di Ferrara, Italy*
A. Vecchio, *LMS International, Belgium*

10:30 Helicopter Cabin Noise Reduction: from Available Technologies to Implementation (ID 368)

F. Cenedese, A. Perazzolo, *AgustaWestland, Italy*

FRIENDCOPTER project: Rotorcraft noise and vibration – FCOP2

Room 4 – Chairman: A. Vecchio

11:20 Active control of helicopter gearbox supports and effects on cabin acoustic field (ID 405)

W. Corbetta, A. Toso, E. Vigoni, G.L. Ghiringhelli, L. Dozio, *Politecnico di Milano, Italy*

F. Cenedese, *AgustaWestland, Italy*

11:45 Use of Noise Barriers for Helicopter Noise Mitigation (ID 437)

P. Menounou, E. Papaefthymiou, *University of Patras, Greece*

12:10 Transfer Path Analysis of the Agusta Westland AW-109 performed by means of in-flight data and POLYMAX synthesized FRFs (ID 579)

L. Testa, *Università degli Studi di Trieste, Italy*

A. Vecchio, *LMS International, Belgium*

L. Bregant, *Università degli Studi di Trieste, Italy*

Sound quality engineering – SQE1

Room 4 – Chairman: K. Janssens

14:00 Adaptive control schemes for engine sound qualityimprovement (ID 378)

L.P.R. de Oliveira, B. Stallaert, W. Desmet, P. Sas, *Katholieke Universiteit Leuven, Belgium*

K. Janssens, H. Van der Auweraer, *LMS International, Belgium*

14:25 Predictive modeling of audio quality inside car cabins (ID 289)

G. Vandernoot, P. Van Der Linden, P. Mas, *LMS International, Belgium*

C. Locqueteau, E. Leborgne, *Renault, France*

14:50 Numerical case-study on the development of acoustic equivalent source models for use in sound synthesis methods (ID 413)

D. Berckmans, B. Pluymers, P. Sas, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

Model updating and correlation – MU1

Room 5 – Chairman: E. Balmès

8:50 Efficient Methods in Stochastic Model Updating (ID 200)
H. Haddad Khodaparast, J.E. Mottershead, *University of Liverpool, United Kingdom*

9:15 Optimization of the Dynamic Response of a Complete Exhaust System (ID 74)
T. Lauwagie, J. Strobbe, E. Dascotte, *Dynamic Design Solutions, Belgium*
J. Clavier, M. Monteagudo, *Faurecia Exhaust System Division, France*

9:40 Regularization for Symmetric and Almost Symmetric Systems in Model Updating (ID 145)
B. Titurus, M.I. Friswell, *University of Bristol, United Kingdom*

10:05 Blade Model Updating to enable bladed disc mistune assembly response predictions (ID 55)
H. Kurt-Elli, *Rolls-Royce plc, United Kingdom*

Model updating and correlation – MU2

Room 5 – Chairman: M. Link

10:55 Robust parametric updating of uncertain finite element models from experimental modal analysis (ID 290)
E. Capiez-Lernout, C. Soize, *Université Paris-Est, France*
R. Ohayon, *CNAM, Conservatoire National des Arts et Métiers, France*

11:20 Multi-objective optimization algorithms for finite element model updating (ID 460)
E. Ntotsios, C. Papadimitriou, *University of Thessaly, Greece*

11:45 Modal correlation and updating of a vehicle body-in-white (ID 556)
M.A. Burnett, W.G. Young, *MIRA Ltd, United Kingdom*

12:10 Error localization in an FE model in model updating process using supermodels (ID 606)
C. Zang, *Nanjing University of Aeronautics and Astronautics, China*
C. Schwingshackl, D.J. Ewins, *Imperial College London, United Kingdom*

Active vibration control and smart structures – AVC5

Room 6 – Chairman: J. Swevers

8:50 Periodic Disturbance Rejection on a Laser Beam Stabilizing System with Adaptive Controllers (ID 8)
S. Maier, *German Aerospace Center (DLR), Germany*
M. Bodson, *University of Utah, United States*

9:15 Friction based vibration absorber with application in machine tools (ID 44)
J. Roseira, T. Krappel, L. Gaul, *University of Stuttgart, Germany*

9:40 Toward an Optimal Design Procedure of a Nonlinear Vibration Absorber Coupled to a Duffing Oscillator (ID 62)
R. Viguié, G. Kerschen, *University of Liège, Belgium*

10:05 Design of Active Damper Controlled by Piezoelectric Stack (ID 100)
R.L. Teixeira, F.P. Lépore Neto, J.F. Ribeiro, *Federal University of Espírito Santo, Brazil*

Aeroacoustics and flow noise – AA2

Room 6 – Chairman: W. De Roeck

10:55 A hybrid numerical method for analysing multi-mode sound propagation in ventilation ductwork (ID 184)
R. Kirby, *Brunel University, United Kingdom*

11:20 Experimental acoustic identification of flow noise sources in expansion chambers (ID 578)
W. De Roeck, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

11:45 A 2D Discontinuous Galerkin Method for Aeroacoustics with Curved Boundary Treatment (ID 580)
T. Toulorge, Y. Reymen, W. Desmet, *Katholieke Universiteit Leuven, Belgium*

12:10 Optimization of hybrid aeroacoustic computations of an industrial confined flow through mesh coarsening techniques (ID 508)
G. Guilloud, P. Martinez-Lera, C. Zacharopoulos, C. Schram, *LMS International, Belgium*

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room 1	room 2	room 3	room 4	room 5	room 6	room 7	room 8	cafeteria
MB1	FLI1	SD1	NVH1	VAM1	ANC1	SDD1	SP1	POS1
SEV1	OMA1	TPA1	NVH2	MHF1	AVC1	RMM1	UNC1	

room 1	room 2	room 3	room 4	room 5	room 6	room 7	room 8	cafeteria
MYM1	RAIL1	MTC1	NVH3	MHF2	AVC2	SDD2	UNC2	POS2
SC1	RAIL2	MTC2	I1	MHF3	AVC3	SDD3	UNC3	

MB2	CIV1	MTC3	PE1	VAM2	AVC4	RMD1	UNC4	POS3
AA1	OMA2	CM1	D1	UND1	NC1	RMD2	I2	

room 1	room 2	room 3	room 4	room 5	room 6
D2	RAIL3	SD2	FCOP1	MU1	AVC5
NL1	DT1	SD3	FCOP2	MU2	AA2

OMA3	CIV2	ARR1	SQE1

AA	Aeroacoustics and flow noise
ANC	Active noise control
ARR	Source localisation - Array techniques
AVC	Active vibration control and smart structures
CIV	Civil applications
CM	Condition monitoring
D	Damping
DT	Durability testing - vibration control
FCOP	FRIENDCOPTER project: Rotorcraft noise and vibration
FLI	EUREKA project FLITE2: System identification for ground and flight vibration testing
I	Instrumentation
MB	Multi-body dynamics and control
MHF	Medium and high frequency techniques
MTC	Modal testing: methods and case studies
MU	Model updating and correlation
MYM	MYMOSA project: Integrated motorcycle safety
NC	Noise control: case studies
NL	Non-linearities: identification and modelling
NVH	Vehicle noise and vibration (NVH)
OMA	Operational modal analysis
POS	Poster session
PE	Parameter estimation
RAIL	Railway dynamics and ground vibrations
RMD	Dynamics of rotating machinery
RMM	Monitoring and diagnostics of rotating machinery
SC	Substructuring and coupling
SD	Structural dynamics: methods and case studies
SDD	Structural damage detection
SEV	Self excited vibrations
SP	Signal processing
SQE	Sound quality engineering
TPA	Transfer path analysis and source identification
UNC	Uncertainties in structural dynamics and acoustics
UND	Underwater and ship acoustics
VAM	Vibro-acoustic modelling and prediction