

NOISE IN THE BUILT ENVIRONMENT

29-30 APRIL 2010

Ghent

Delegate List



THURSDAY 29 APRIL

08.30 Registration and coffee

09.00 Opening and Welcome

Chair: Bridget Shield

Room: Rafter

09.20 Plenary Lecture

Soundscapes: where are we?

Jian Kang, Sheffield University, UK

10.20 Coffee

NOISE BARRIERS

Chairs: Jean-Pierre Clairbois, Gregg Watts

Room: Rafter

- 10.40 New Dutch legislation and an efficiency criteria for measures around motorways
Cristo Padmose, Padmos Geluidadvies, The Netherlands
- 11.00 20 years of in situ measurements on noise barriers in retrospect
Patrick Demizieux, Laboratoire Régional des Ponts et Chaussées de Strasbourg, France
- 11.20 QUIESST: toward a better knowledge and understanding of how efficient noise barriers could actually be
Jean-Pierre Clairbois, A-tech Acoustic Technologies, F de Roo, TNO, M Garai, M Conter, Jerome Defrance, C Oltean-Dumbrava, I Fusco
- 11.40 Effect of ground scattering on noise barriers efficiency
Alexis Billon, University of Liège, Belgium
- 12.00 Impact of plants on the protection effect of noise barriers
Markus Weber, Basler & Hofmann, Peter Angst, Rutishauser, Switzerland

12.20 Lunch

SOUNDSCAPES 1

Chairs: Monika Rychtarikova, Bert de Coensel

Room: Rector Vermeylen

- 10.40 Acoustical assessment of urban public places
Monika Rychtarikova, Gerrit Vermeir, KU Leuven, Belgium
- 11.00 Trans-acousmatic design: a tool for permanent sound installations in city parks
Bjorn Hellstrom, University College of Arts, Crafts & Design, Sweden
- 11.20 Quietening open spaces – towards sustainable city soundscapes
Mary Stevens, Environmental Protection UK
- 11.40 Imitating human auditory processing for urban soundscape measurement
Damiano Oldoni, Bert De Coensel, Dick Botteldooren, Ghent University, Belgium
- 12.00 First principles for sound event recognition for soundscape research
Dirkjan Krijnders, INCAS, Netherlands

12.20 Lunch

EFFECTS OF NOISE ON HEALTH 1

Chairs: Peter Lercher, Annelies Bockstael

Room: Oude Infirmerie

- 10.40 Airport noise and its implication to the built environment
Colin Waters, Manchester Metropolitan University, UK
- 11.00 The effects of noise calculation methods on annoyance and health association estimation
Peter Lercher, Medical University Innsbruck, Timothy Van Renterghem, L Dekoninck, Dick Botteldooren, Ghent University, Marine Baulac, Jerome Defrance, CSTB, France
- 11.20 Outdoor noise-contribution to indoor noise levels in the city of Girona

Alexandre Deltell, Maria Foraster, Eva Santos, University of Girona, Spain, Laura Bouso, Marcela Rivera, CREAL, Spain, Josep Arnau, University of Girona, Nino Kunzli, ISPM, Switzerland

- 11.40 Noise and air pollution correlation and its determination in the city of Girona
Maria Foraster, Centre for Research in Environmental Epidemiology, Spain, Alexandre Deltell, GREFEMA, Spain, Xavier Basagana, Inma Aguilera, Laura Bouso, CREAL, Spain, Marcela Rivera, Jordi Sunyer, CREAL, Spain, Jaume Targa, AEA Energy & Environment, UK, Nino Kunzli, ISPM, Switzerland
- 12.00 The influence of trip behaviour on assessment of the quality of the living environment
Dick Botteldooren, Luc Dekoninck, Dominique Gillis, Dirk Lauwers, Ghent University, Belgium

12.20 Lunch

Chair: Jean-Pierre Clairbois

Room: Rafter

13.20 Plenary Lecture

Recent advances in noise barriers testing, qualifying and standardisation
Massimo Garai, University of Bologna, Italy

ROAD TRAFFIC NOISE: DYNAMIC MODELS

Chairs: Arnaud Can, Dick Botteldooren

Room: Rafter

- 14.20 Comparison of static and dynamic approaches for urban traffic noise assessment: a case of study in Lyon (France)
Ludovic Leclercq, University of Lyon, France, Arnaud Can, Ghent University, Belgium, Joël Lelong, INRETS, France
- 14.40 Combined assessment of noise and air pollution caused by road traffic
Bert De Coensel, Arnaud Can, Dick Botteldooren, Ghent University, Madhara Madireddy, VITO, Belgium
- 15.00 Auralization and psychoacoustic analysis of virtual road traffic scenarios
Andre Fiebig, HEAD acoustics, Germany

15.20 Coffee

SOUNDSCAPES 2

Chairs: Robert Pheasant, Jian Kang

Room: Rector Vermeylen

- 14.20 Social deprivation and accessibility to quiet areas in Southampton
Juan Battaner-Moro, Christopher Barlow, Paul Wright, Southampton Solent University, UK
- 14.40 Validation of tranquillity rating method
Greg Watts, Robert Pheasant, Kiril Horoshenkov, University of Bradford, UK
- 15.00 Quiet areas and the need for quietness in Amsterdam
Hester Booi, OS Amsterdam, The Netherlands

15.20 Coffee

EFFECTS OF NOISE ON HEALTH 2

Chairs: Annelies Bockstael, Stephen Dance

Room: Oude infirmerie

- 14.20 A survey of noise levels in a post-surgical children's ward
Nicola Shiers, Bridget Shield, Rosemary Glanville, London South Bank University, UK
- 14.40 A longitudinal study of hearing loss amongst classical musicians
Georgia Zepidou, Sound Research Laboratories, Stephen Dance, London South Bank University,
- 15.00 An orchestra's noise exposure
Stephen Dance, London South Bank University, Georgia Zepidou, Sound Research Laboratories,

15.20 Coffee

Chair: John Hinton

Room: Rafter

15.40 Tyndall Medal Lecture

Effective medium models for granular materials and composites
Olga Umnova, University of Salford, UK

ROAD TRAFFIC NOISE: ROAD SURFACES

Chair: Luc Goubert

Room: Rafter

16.20 Measurements of noise emission of Hungarian roads using the CPX method
Reinhard Wehr, Marco Conter, Austrian Institute of Technology, Austria

16.40 Methods to measure the noisiness of roads
Anneleen Bergiers, Belgium Road Research Centre, Belgium

17.00 The PERSUADE project: developing the poro-elastic road surface to a powerful tool in traffic noise abatement
Luc Goubert, Belgium Road Research Centre, Belgium

17.20 Legislation and policy regarding silent pavements on motorways in the Netherlands: past, present and future
Wiebe Alberts, Rijkswaterstat, The Netherlands

17.40 Psychophysical Criterion to Determine the Effectiveness of Low-noise Pavements
Wim van Keulen, VANKEULEN advies bv, The Netherlands

18.00 CLOSE

SOUNDSCAPES 3

Chairs: Robert Pheasant, Jian Kang

Room: Rector Vermeylen

16.20 Towards a measuring unit for soundscape based on white noise
M Boubezari & J L Bento Coelho, Universidade Technica de Lisboa, Portugal

16.40 Perception of aural attributes in different types of urban environment
Y Smyrnova, Jian Kang, L Yu, University of Sheffield, Kiril Horoshenkov, R Pheasant, Greg Watts, University of Bradford

17.00 Sound signals to improve way-finding in a train station
Julien Tardieu, IRCAM, France

17.20 Urban park soundscapes and their perceived restorativeness
Sarah Payne, McGill University, Canada

ACOUSTICS OF INTERIOR SPACES

Chair: Bridget Shield

Room: Rector Vermeylen

17.40 Acoustic modelling and testing of a music rehearsal facility
Nick Durup, Sharps Redmore Partnership & Stephen Dance, London South Bank University, UK

18.00 Acoustic simulation of u-shaped long space in hospitals
Hui Xie, Jian Kang, University of Sheffield, UK

18.20 CLOSE

INDUSTRIAL AND ENTERTAINMENT NOISE

Chairs: Jim Griffiths, Jean-Jacques Embrechts

Room: Oude Infirmerie

16.20 Real-time auralization of industrial noise
J J Embrechts, University of Liege, Belgium

16.40 The challenges of placing 67T standby generators on top of a long span steel structure
Roger Kelly, CDM UK

17.00 Urban square sound fields during rock concerts

- Pieter Thomas, Timothy Van Renterghem, Luc Dekoinck, Dick Botteldooren, Ghent University, Belgium
- 17.20 Noise control of outdoor music festivals-legislation and electronically amplified music
Claude Bataillie, Lut Muysshondt, Rita De Schuyter, Provincial Institute of Environmental Research, Belgium
- 17.40 Acoustic predictions of high power sound systems – software modelling and verification measurements
Olly Creedy, Mark Murphy, , Vanguardia Consulting, UK
- 18.00 Advances in roof top wind turbines and their installation
Stephen Dance, S Hassan, London South Bank University, Anne Unwin, Capita Symonds, UK

18.20 CLOSE

19.00 CONGRESS DINER at Gravensteen, including visit

FRIDAY 30 APRIL

Chair: Dick Botteldooren
Room: Rafter

9.10 Plenary Lecture

Acoustical exploitation of periodic structures in the urban environment
Keith Attenborough, The Open University, UK

10.00 Coffee

URBAN SOUND PROPAGATION

Chair: Timothy Van Renterghem, Keith Attenborough
Room: Rafter

- 10.20 Towards a sound diffusion characterization in the urban environment – from isovist tool to acoustic scattering indicator
Philippe Woloszyn, Universite de Haute Bretagne, Thomas Leduc, Pascal Joanne, CERMA Laboratory, France
- 10.40 On the approximation of total absorption of the street open ceiling at low frequency
Adrien Pelat, Bertrand Lihoreau, LAUM, CNRS, University of Maine, France
- 11.00 A numerical study of the use of acoustic diffusers to reduce noise in urban areas
Judicaël Picaut, Laboratoire Central des Ponts et Chaussées, Denis Scouarnec, Acoustic Comfort Laboratory, France
- 11.20 Model study of urban traffic noise and quiet facades, in relation with annoyance and sleep disturbance
Erik Salomons, Han Zhou, Henk Vos, Yvonne de Kluzenaar, Sabine Janssen, TNO Delft, Frank van Lenthe, Erasmus University medical Center, The Netherlands
- 11.40 Coherent and incoherent reflections at building facades
Kurt Heutschui, EMPA, Switzerland
- 12.00 Numerical study to the effects of façade properties on sound propagation to a three-dimensional urban courtyard
Maarten Hornikx, KU Leuven, Belgium, Jens Forssén, Chalmers University of Technology, Sweden
- 12.20 Computational model for long-range sound propagation over urban environments
Thomas Leissing, Christian Soize, Philippe Jean, Jérôme Defrance, Universite Paris-Est, France

12.40 Lunch

RAILWAY NOISE 1

Chairs: Geert Degrande, Roger Kelly

Room: Rector Vermeylen

- 10.20 A comparative study of the efficiency of vibration and re-radiated noise from underground railway traffic
Peter Fiala, Budapest University of Technology and Economics, Hungary, H Verbraken, G Lombaert, G Degrande, KU Leuven, F Augusztinovicz, Budapest University of Technology & Economics, Hungary
- 10.40 Effect of various vibration measure for dwellings along the railway track in Utrecht
Herke Stuit, Movares, The Netherlands
- 11.00 Vibration mitigation for metro line on soft clay
Christian Madshus, Karin Noren-Cosgriff, Norwegian Geotechnical Institute, Arid Brekke, Brekke and Strand Acoustics, Norway
- 11.20 Noise of high speed trains in the Netherlands: an exploration
Eric Schreurs, Jan Jabben, Edwin Verheijen, National Institute for Public Health and the Environment, Netherlands
- 11.40 Reduction of vibration in a Station building in South America
Koen Ophalffens, Paulo Pinto, Patrick Carels, CDM, Belgium Roger Kelly, CDM, UK
- 12.00 Building base isolation as a mitigation measure for rail traffic noise
Michael Vanstraelen, CDM, Belgium
- 12.20 Factors influencing the human response to vibration from railways in residential environments
Eulália Peris, University of Salford, UK

12.40 Lunch

CLASSROOM ACOUSTICS

Chair: Emma Greenland, Andrew Parkin

Room: Oude infirmerie

- 10.20 Realizations – classroom acoustics
Jan Dolejsi, Studio D – akustika, The Czech Republic
- 10.40 BB93: past, present an future
Andrew Parkin, RPS Group, UK
- 11.00 A preliminary survey of noise levels in UK secondary schools
Robert Conetta, B M Shield, London South Bank University, Trevor Cox, University of Salford, Julie Dockrell, Daniel Donnolly, Institute of Education, UK
- 11.20 Preliminary findings from a survey of students' perception of their acoustic environments in English secondary schools
Daniel Connolly, Institute of Education, London
- 11.40 Case study evaluations of the influence of BB93 on the acoustic design of school buildings
Mike Wood, University of Exeter, UK
- 12.00 When BB93 just isn't good enough - school acoustics design for excellence
Adrian James, Adrian James Acoustics, David Canning, Consultant, UK

12.20 Lunch

Chair: Walter Lauriks

Room: Rafter

13.20 Plenary Lecture

Recent advances in sound quality
Patrick Van de Ponsele, LMS International

NOISE POLICY

Chair : Colin Grimwood

Room : Rafter

- 14.20 Is there a right to be protected against noise?
Catherine Van de Heyning, University of Antwerp, Belgium
- 14.40 Updating the electronic noise data reporting mechanism (ENDRM) to support member state reporting under the Environmental Noise Directive
Colin Nugent, European Environment Agency, Anna Backman, EEA EPON, Nuria Blanes, EEA ETC-LUSI, Nigel Jones, Extrium, Roman Orter, UBA
- 15.00 Night-time noise offence – the research behind the permitted noise level adopted in the UK
Jim Griffiths, Vanguardia Consulting, UK

15.20 Coffee

RAILWAY NOISE 2

Chairs: Geert Degrande, Roger Kelly

Room: Rector Vermeylen

- 14.20 Reducing vibration in continuously supported track
Roger Kelly, CDM, UK, Koen Ophalffens, Paulo Pinto, Patrick Carels, CDM, Belgium,
- 14.40 In situ determination of dynamic track parameters in order to model and predict noise and vibration reducing measures
Ward Verhelst, Infrabel, Belgium
- 15.00 Source-receiver model of a building excited by ground borne vibration
Michel Villot, Pierre Ropars, Philippe Jean, CSTB, France

15.20 Coffee

BUILDING ACOUSTICS

Chairs: Gerrit Vermeir

Room: Oude infirmerie

- 14.20 Airborne sound insulation from building partitions: point source and plane source model
Hugo P Verhas, Independent Consultant, Belgium
- 14.40 The use of statistical energy analysis (SEA) for the prediction of the sound reduction index of double systems with large cavity
Marcelo Blasco, Blasco Ltd, G Vermeir, KU Leuven, A De Herde, UC Louvain, Belgium
- 15.00 Variation in field measurement of airborne sound insulation of lightweight timber floors
Bill Whitefield, noise.co.uk, Barry Gibbs, University of Liverpool, UK

15.20 Coffee

NOISE MEASUREMENT

Chairs: Stephen Dance

Room: Rafter

- 15.40 The use of cheap microphones in extensive outdoor noise monitoring networks
Timothy Van Renterghem, Pieter Thomas, Dick Botteldooren, Samuel Dauwe, Ghent University, Frederico Dominguez, Abdellah Touhafi, VUB, Belgium
- 16.00 Acoustics uses for the iPhone
John Zeman, Stephen Dance, London South Bank University, UK
- 16.20 The use of reciprocity in determining rainfall noise
Nathalie Geebelen, Cauberg-Huygen Consulting Engineers, Netherlands

16.40 CLOSING

Room: Rafter

RAILWAY NOISE 3**Chairs: Geert Degrande, Roger Kelly****Room: Rector Vermeylen**

- 15.40 Ground-borne vibration from underground railways: some commonly-made modelling assumptions and their associated inaccuracies and uncertainties
Hugh Hunt, S Jones, K Kuo, University of Cambridge, Mohammed Hussein, University of Nottingham
- 16.00 Modelling of the dynamic interaction of tunnel- or longitudinal trench-structures in the half space by the application of a set of various fundamental solutions
Georg Frühe, Technische Universität Munchen, Germany
- 16.20 Assessment of an empirical prediction method for railway induced vibration by numerical simulations
Hans Verbraken, H Eysermans, E Deschief, S Francois, G Lombaert, G Degrande, KU Leuven, Belgium

16.40 CLOSING**Room: Rafter**