10th International Congress on Noise as a Public Health Problem 2011

(ICBEN 2011)

Proceedings of the Institute of Acoustics Volume 33 Pt.3

London, United Kingdom
24-28 July 2011

Volume 1 of 2

Editors:

Barbara Griefahn

ISBN: 978-1-61839-079-0
ISSN: 1478-6095
# TABLE OF CONTENTS

## VOLUME 1

**Hearing Loss Is A Public Health Problem Determined By Noise And Life-Course Events** .......................................................... 1
  Adrian Davis

**Healthy Diets And Dietary Supplements: Recent Changes In How We Might Think About Hearing Conservation** .......................................................... 2
  C. Ke Prull, C. Spankovich

**Oral Pharmacologic Otoprotective Agents To Prevent Noise-Induced Hearing Loss (NIHL): When Dietary Concentration Isn’t Enough** .......................................................... 15
  K. C. M. Campbell

**Contribution Of Genetic Factors To Noise-Induced Hearing Loss** ................................................................................................. 22
  Mariola Slivinska-Kowalska

**Summary Of Evidence Of Risk For Noise-Induced Hearing Loss From Recreational Music Exposures: Prevalence Estimates And Potential Severity Of Threshold Shift And Other Hearing Disorders** .......................................................... 23
  B. J. Fligor

**Novel Personal Noise Dosimeters** ................................................................................................................................................. 34
  Stephen Dance, Bradford Backus, Emad Bukhary

**Modeling The Incidence And Prevalence Of Noise-Induced Hearing Loss In New Zealand** .......................................................... 39
  P. Thorne, G. John, A. Grynevych, J. Stewart, S. Ameratunga, D. Welch

**Exposure To Very High Noise Levels And The Effect Of Double Hearing Protection** ............................................................................. 46
  S. E. Mercy, S. H. James

**MP3 Player Listening Sound Pressure Levels Among 10 To 17 Year Old Students** .................................................................................. 55
  S. E. Keith, D. S. Michaud, K. Fedor, Ifaz Haidor, L. Marro, E. Thompson, A. Marcoux

**Driving Change For The Better In Occupational Health Surveillance For Noise Induced Hearing Loss** .......................................................... 60
  C. Forshaw

**Hearing Loss Amongst Classical Music Students** .................................................................................................................. 68
  G. Zepidou, S. Dance

**Hearing Loss In Professional Orchestrational Musicians** ............................................................................................................. 74
  M. Pawlczuk-Luszczynska, A. Dudarewicz, M. Zamojska, M. Sliwinska-Kowal

**The Use Of Hearing Protection Devices (HPDs) In A Group Of South African Musicians** .......................................................... 82
  K. Horrell, K. Joubert, L. Petrocchi-Bartal

**Assessment Of Life Course Noise Exposure** ..................................................................................................................................... 90
  David Welch, Gareth John, Alla Grynevych, Peter Thorne

**The Monitoring Role Of Otoacoustic Emissions And Oxidative Stress Markers In The Protective Effects Of Antioxidant Administration In Noise-Exposed Subjects: A Pilot Study** .......................................................... 96
  M. Garzaro, L. Raimondo, A. R. Fetoni, G. Pecorari, G. Paludetti, C. Giordano

**Comparison Of Hearing Loss In Elderly With And Without History Of Occupational Noise Exposure** .................................................. 105
  Luciana Lozza De Moreas Marchiori, Juliana Andre Melo, Caroline Luiz Menese

**Using Multiple Media Outlets To Enhance A Community Based Noise-Induced Hearing Loss Prevention Program** .......................................... 111

**Hearing Thresholds Of Young Workers And Conscripts In Switzerland** .................................................................................. 114
  Salome Ryf, Franz Frey, Beat Hohmann, Carlo Prestele

**Vuvuzelas At South African Soccer Matches: Risks For Spectators’ Hearing** .................................................................................. 119
  L. Ramna, L. Petersen, S. Singh

**Noise Induced Hearing Loss In The Entertainment Sector** ............................................................................................................. 127
  E. Toppila, H. Koskinen, A. Savolainen, R. Paakonen, E. Airo, P. Ollikoina, I. Pyykko

**The Influence Of Room Acoustic Aspects On The Noise Exposure Of Symphonic Orchestra Musicians** .................................................. 133
  R. H. C. Wenmaekers, C. C. J. M. Hak, L. C. J. Van Luxemburg

**Hearing Function In Workers Engaged In Industry: Georgian Material** .................................................................................. 141
  N. Sharashenidze, I. Khundadze, M. Tushishvili, Z. Kevanishvili

**Four-Chamber Cochlea Box Model: Establishing Acoustic Comfort, Illustrating Injury And Towards Therapy** .................................. 146
  Luis Maria Bo-o, Henry Lee, Che-Ming Chiang, Henry Ramos

**Noise Exposure And Hyperacusis** ............................................................................................................................................. 147
  Deepak Prasher, Hashir Aazh

**Are Occupational Noise-Exposure Levels Declining?** ............................................................................................................. 148
The Audience Is Influenced By The Loud Sound In The Open-Air Stage Concert In The Campus Festival..................................................152
Satoshi Mizuta, Kenji Muto, Masataka Chikai, Yasuhiro Shimono, Shohei Nakayama, Hideo Shibayama

The Determination Of Noise Effect On Hearing Level And Performance Of Teachers In Primary Schools..........................................................156
Meymehnejafari, Naminar, Mohammad Ronaghi, Mohammad Reza Keihan, Jafar Sameni

A Consideration About Effect Of Ear Protector In 3-Tesla MRI Driving Sound...........................................................................157
Masataka Chikai, Kenji Muto, Yasuhiro Shimono, Kazuo Yagi, Yuki Arakawa

Possible Identification Of Noise-Induced Hearing Loss Susceptibility Genes..................................................................................163
Regina Celia Poli-Frederico, Luciana Loza De Moraes Marchiori, Juliana Jandre Melo, Paula Carolina Dias
Gibrin, Luiz Carlos Lucio Carvalho

Auditory Effects Of Noise Exposure During Magnetic Resonance Imaging..................................................................................169
S. Sasheendran, S. Suress, Y. Krishna, B. Rajashekar

Classroom Acoustics And Self-Reported Noise Exposure As Determinants Of Fatigue After Work, Job Satisfaction And Intentions To Quit The Job Among School Teachers..........................................................174
J. Kristiansen, R. Persson, S. P. Lund, H. Shibuya, P. M. Nielsen

Noise And Hearing Loss In Developing Countries..................................................................................................................179
Deepak Prasher

D-Methionine In Preventing Noise-Induced Hearing Loss ........................................................................................................180
Mariola Sliwinska-Kowalska

Self-Reported Noise-Disturbance And Hearing Of Schoolteachers In Relation To Audiometric Determinations...........................................................................................................181
S. P. Lund, J. Kristiansen, R. Persson, H. Shibuya, P. M. Nielsen

Real-Ear Attenuation Of Hearing Protection In Young Children.......................................................................................................184
D. K. Meinke, E. H. Berger, J. Eggebrecht

Comparison Of Impulse Noise Levels Generated By A .22 Caliber Starter Pistol And A .22 Revolver...................................................192
J. Sondgaard, D. Meinke, D. Finan, G. Flamme, J. Lankford, M. Stewart

Evaluation Of Awareness Of Noise-Induced Hearing Loss Among South African Soccer Spectators..........................................................199
Lebogang Ramma

From ISO 1999 To Noise Policy..................................................................................................................................................205
E. Toppila, R. Puukonen

Increased DPOAE Levels Following High Level Noise Exposure: A Case Study Using DPOAE Level/Phase Mapping................................................................................................................212
D. Meinke, O. Clavier, J. Norris, R. Kline-Schoder, J. Buckey

Usage Of Personal Music Player Among Teenagers And Young Adults In Malaysia................................................................................219
A. H. Sulaiman, K. Schakumaran, R. Hussen

Advanced Hearing Protection And Communication: Progress And Challenges..........................................................................225
C. Giguere, C. Larouche, A. J. Brammer, V. Vaillancourt, G. Yu

Update On Fitness Standards For Hearing-Critical Jobs.................................................................................................................234
C. Larouche, C. Giguere, V. Vaillancourt, S. Soli

The Perceptual And Cognitive Aspects Of Warning Sound Design......................................................................................................242
J. Edworthy

Communication In Noise For Aging Adults: Interactions Of Auditory, Cognitive And Social Factors......................................................................248
M. K. Pichora-Fuller

Effect Of Noise And Reverberation On Vocal Effort And Fatigue Of Primary School Teachers..........................................................256

Using Cluster Analysis To Explore How Children Use Semantic Cues When Listening To Sentences Presented With A Babble Noise........................................................................264
J. Lagace, C. Giguere, S. Breau Godwin

Improvement Of Speech Privacy In Open-Plan Offices ..................................................................................................................272
P. J. Lee, B. K. Lee, J. Y. Jeon

Comparison Of Different Vehicle Backup-Alarm Types With Regards To Worker Safety........................................................................279
H. Nelisse, C. Larouche, C. Giguere, J. Boutin, V. Vaillancourt, P. Laferriere

Intelligibility Of Speech Corrupted By Nonlinear Distortion...........................................................................................................287

Poor Acoustical Environment: An Architectural Barrier To People With Hearing Loss........................................................................293
J. Handelsman, V. Gladstone

Perception Of Classroom Acoustics And Listening Tests – A Web-Based Survey..............................................................................297
K. Persson Waye, L. Magnusson, A. Agge, K. Kahari

Noise And Cardiovascular Disease: A Review Of The Literature 2008-2011..................................................................................302
Hugh Davies, Irene Van Kamp
Noise And Health In Vulnerable Groups: A Review
Irene Van Kamp, Hugh Davies

312

Dose-Response Relationships Between Hypertension And Several Night Noise Indices Of Aircraft
T. Matsu, K. Hiramatsu

Noise Exposure Around The Kadena US Airfield In Okinawa
E. Van Kempen, W. Babisch

323

The Quantitative Relationship Between Road Traffic Noise And Hypertension: A Meta-Analysis
G. Bellojevic, G. W. Evans

331

Traffic Noise And Blood Pressure In North-American Urban Schoolchildren
J. Paunovic, G. Bellojevic, V. Stojanov, B.Jakovljevic

336

Spatial Relationships Between Residential Levels Of Traffic Noise From Road And Rail And Air
Pollution In Oslo, Norway
B. Oftedal, G. M. Aasvang, C. Madsen, P. E. Schwarze, S. E. Walker, E. Aune, P. Naftaud

343

Cross-Sectional Association Between Road Traffic Noise And Hypertension In A Population-Based
Sample In Girona, Spain (REGICOR-AIR Project)
R. Elosua, N. Kunzli

351

Exposure To Road, Aircraft And Railway Noise And The Incidence Of Antihypertensives Use
D. Houthuijs, M. Marra, O. Breugelmans, C. Van Wiechen, F. Griens, W. Swart, J. Van De Kassteele

354

Risk Increase Of Cardiovascular Diseases And Impact Of Aircraft Noise - The Cologne-Bonn Airport
Study
Eberhard Greiser, Claudia Greiser, Katrin Janhsen

362

Effects Of Workplace Noise Exposure During Pregnancy. Systematic Review With Meta-Analysis
And Meta-Regression
Agathe Croteau, Maurice Poulin, Lise Goulet, Mylene Trottier

363

Noise Sensitivity - Medical, Psychological And Genetic Aspects
Marja Heinonen-Guzejev, Heikki S. Vuorinen, Helena Matsu-Rauhamaa, Kauko Heikila, Tapani Jauhenhinen,
Markku Koskenvuo, Jaakko Kaprio

364

Patterns Of Physiological And Subjective Responses To Vehicle Pass-By Noises, Depending On Age,
Gender, And Personality Traits
G. Natbohn, R. Schmook, S. Schwarze

373

Road Traffic Noise, Air Pollution And Blood Pressure In Oslo, Norway

382

Noise Exposure And Serum Lipid Levels When Adjusted For Established Risk Factors

386

NORAH – Study On Noise-Related Annoyance, Cognition And Health: A Transportation Noise
Effects Monitoring Program In Germany
D. Schreckenberg, T. Eikmann, F. Faulbaum, E. Haufe, C. Herr, M. Klatte, M. Meis, U. Mohler, U. Muller, J.
Schmitt, A. Seidler, E. Swart, H. Zeeb, A. Zur Nieden, R. Guski

390

Reliability And Validity Of Instruments To Measure Pre-School Children’s Reaction To And Coping
With Noise
Kerstin Persson Waye, Irene Van Kamp, Katrin Nielsen, Lotta Dellve

399

Occupational Noise Exposure And The Risk Of Stroke

407

Long-Term Exposure To Traffic Noise And Traffic-Related Air Pollution And Coronary Heart
Disease Mortality
Wenqi Gan, Hugh Davies, Mieke Koehoorn, Lillian Tamburic, Paul Demers, Mike Brauer

410

The Effects Of Recorded Traffic Noise On Hemodynamic Parameters In Healthy Women – A Pilot
Study
K. Paunovic, G. Bellojevic, V. Stojanov, B. Jakovljevic

418

The Effect Of Aircraft Noise Exposure On Quality Of Life And Psychiatric Problem: A Report Of
The Bangkok Airport Study
C. Ekpanyaskul, C. Padungtod, W. Monlang, P. Nachpongsai, T. Matsu, K. Hiramatsu

422

Disruptive Effect Of Urban Environmental Noise On The Physiological Recovery Response After
Stress Testing
K. Herranz-Pascual, I. Irurugi, J. Garcia-Perez, I. Aspuru, I. Garcia-Borraqueo, D. Herrero-Fernandez

426

Reviewing Evidence On Noise Exposure And Non-Auditory Health Effects In The European Network
For Noise And Health (ENNAH)
A. Hansell, H. Lanzlo

434

The Need For And Access To Quiet Areas In Relation To Annoyance, Health And Noise-Sensitivity
E. Van Kempen, I. Van Kamp, H. Kruize

440
Free Field Evaluation Of The Influence Of Naturalistic Road And Rail Traffic Noise On Both 
Psychological And Physiological Parameters ................................................................. 448

Michael Cik, Kurt Fallast, Egon Marth

The Effects Of Noise On Biochemical Parameters Using Rat’s Hearts .......................... 456

Ailin Razali, Salm Muayad, Ni Ni Win, H. M. Rafidah

The Effects Of Noise On Cardiovascular Parameters Using Isolated Rat’s Hearts .......... 457

Salm Muayad, Ailin Razali, Ni Ni Win, H. M. Rafidah

The Influence Of Noise On Performance And Behavior – 3 Year Update ..................... 458

C. Clark, P. Sorqvist

Noise In Secondary Schools: Pupils’ Perceptions And Performance .............................. 468

Julie Dockrell

Noise Effects On Children’s Cognition - WHO Work On Noise, Burden Of Disease (Bod) And 
Disability-Adjusted Life Years (DALY) ............................................................... 469

S. Hyge

The Long-Term Effects Of Aircraft Noise Exposure On Children’s Cognition: Findings From The 
UK RANCH Follow-Up Study .................................................................................. 477

C. Clark, J. Head, S. A. Stansfeld

Effects Of Noise, Job Characteristics And Stress On Mental Health And Accidents, Injuries And 
Cognitive Failures At Work ....................................................................................... 486

Andrew P. Smith

Disruption Of Cognitive Performance By Sound: Differentiating Two Forms Of Auditory Distraction .......................... 493

Robert W. Hughes, Francois Vachon, Mark Harlstone, John E. Marsh, William J. Macken, Dylan M. Jones

The Importance Of Meaning In Ambient Speech To Eliciting Cognitive Performance Effects ................................................................. 500

S. J. Schlittmeier, A. Assfalq, H. Hofmann, A. Liebl

Room Acoustics And Work Performance - Experimental Study In A Full-Scale Open-Plan Office 
Laboratory .................................................................................................................. 507

Anna Haapakangas, Valterri Hongisto, Joonas Kokko, David Oliva, Jukka Keranen, Jarkko Hakala, Jukka Hyona

Impact Of Intensive Care Unit Noise On Nurses ........................................................... 515

E. E. Ryherd, S. Okcu, T. Hsu, C. Zimring, K. Persson Waye

Consideration Of Objective Measures Of Performance And Subjective Assessments Under 
Background Speech In Open-Plan Offices ................................................................... 523

M. Hawighorst, A. Liebl

Memory Of Spoken Discourse Masked By Speech ....................................................... 528

P. Sorqvist, J. Ronnberg

Restoration At Work: Effects Of Different Sound Exposures ...................................... 532

H. Jahanne

Background Noise Means Process Interference In Counting Performance ................. 540

R. Ljung, J. Lene

Children’s Perceptions Of Classroom Noise: Self-Reported Data From Clinical And Non-Clinical 
Populations .................................................................................................................. 546

Linnet Sanchez, David Turner, Sarah Kilcoyne

Metrology Of Subjective Reaction To Noise Through Performance Evaluation .......... 549

L. Rossi, A. Schiavi, A. Astolfi

Comparison Of Five Speech Masking Sounds - A Laboratory Experiment .................. 558

A. Haapakangas, V. Hongisto


VOLUME 2

The Effect Of Aircraft Noise Exposure On Long-Term Memory: A Report Of The Bangkok Airport 
Study .......................................................................................................................... 566

M. Miyakawa, P. Nuchpongmai, T. Matsui, K. Hiramatsu, C. Ekpanyaskul, C. Padungtont, N. Laemun

A Comparison Of Children’s Attention And Cognitive Function Across Noise Conditions – A 
Randomized Controlled Study ..................................................................................... 574

Jiho Lee, Sooyoung Bang, Changmyung Lee, Jaewon Lee, Jaekook Yoon, Joo-hyun Sung, Cheolim Yoo, Changsun Sim

The Effects Of Aircraft Noise On The Auditory Language Processing Abilities Of English First 
Language Primary School Learners .............................................................................. 581

Cara Hollander, Victor De Andrade

Overview Of Research Into Sleep Disturbance Due To Noise In The Last Three Years .... 589

K. Hume
Experimental Shift Work And Noise Exposure During Sleep ................................................................. 595
   Barbara Griefahn, Anke Marks, Sibylie Robens

Acoustic, Individual, And Situational Determinants Of Vegetative And Cortical Arousals Induced By
Traffic Noise During Sleep ................................................................................................................. 603
   Mathias Basner, Uwe Muller, Eva-Maria Elmenhorst

A Comparison Of Noise-Induced Sleep Disturbance Predictions Around Airports Using Awakening
Models And Simplified Sleep Structure Based Models ........................................................................ 610
   S. McGuire, P. Davies

Sleep Disruption Due To Hospital Noises ......................................................................................... 618
   Jeffrey M. Ellenbogen, Orfeu M. Buxton, Wei Wang, Andy Carballeira, Shawn O'Connor, Dan Cooper, Scott M.
   McKinney, Jo M. Solet

Number Of Aircraft Noise Events And Motility During Sleep ......................................................... 627
   S. A. Janssen, H. Vos, I. Van Kamp

An Event-Related Examination Of Awakenings Due To Nocturnal Church Bell Sounds ............... 632
   M. Brink, S. Omlin, M. Basner, R. Pieren

Sleep Times, Sleep Quality And Subjectively Perceived Disturbing Noise Sources In A Representative
Sample Of The Swiss Population ......................................................................................................... 640
   G. Tinguely, C. Cajochen

Impact Of Nocturnal Railway And Aircraft Noise On Awakening Probability In The Field .............. 649
   Eva-Maria Elmenhorst, Uwe Mueller, Vinzent Rohny, Sibyline Pennig, Julia Quehl Hartmut Maab, Mathias Basner

Adverse Health Effects Of Industrial Wind Turbines: A Preliminary Report ..................................... 650
   Michael Nissenbaum, Jeff Aramini, Chris Hanning

   E. A. King, E. Murphy

Sleep Disturbing Effects Of Nightly Church Bell Ringings And Aircraft Noise In The Swiss
Population - An Impact Analysis ......................................................................................................... 662
   Sarah Omlin, Beat Schaffer, Mark Brink

Nocturnal Road Traffic Noise And Sleep: Location Of The Bedroom As A Mediating Factor In The
Subjective Evaluation Of Noise And Its Impact On Sleep ................................................................... 663
   S. Pirriera, E. De Valck, R. Cuydts

Team 6 Activities From 2008 To 2011 ............................................................................................... 669
   T. Yano, S. Lee

Community Response To Noise - A Theory-Based Model For Exposure-Response Relationships ... 673
   T. Gjestland, S. Fidell

Biologically Inspired Modeling Of Environmental Noise Perception ........................................... 680
   D. Botteldooren, B. De Coensel, D. Oldoni, M. Boes, P. Lercher

Comparative Studies On Railway And Road Traffic Noise Annoyances And The Importance Of
Number Of Trains ............................................................................................................................... 686
   A. Gidof-Gunnarsson, E. Ohrstrom, M. Ogren, T. Jerson

The Types Of Human Response To Changes In Noise Exposure ...................................................... 695
   H. E. Lazzlo, A. Hansell

Aircraft Noise Indexes - Recent Developments And Current Applications ....................................... 703
   M. Brink, B. Schueffner, D. Schreckenberg, M. Basner

Differential Exposure Of The Urban Population To Road Traffic Noise In Hong Kong .................. 711
   Kin-Che Lam

Human Response To Vibration In Residential Environments: Establishing Exposure-Response
Relationships ........................................................................................................................................ 719
   James Woodcock, Eulalia Peris, Gennaro Sica, Zbigniew Koziel, Andrew T. Moorhouse, David C. Waddington

Quantitative Model Of Combined Annoyance Caused By Simultaneous Exposure To Outdoor Traffic
Sounds .................................................................................................................................................. 727
   J. Hong, J. Kim, K. Kim, Y. Cho, S. Lee

Dose-Response Relationships For Aircraft Noise Annoyance In Ho Chi Minh City And Hanoi ...... 734
   T. L. Nguyen, T. Yano, Q. Nguyenhuy, T. Nishimura, T. Sato, T. Morihara, Y. Hashimoto

Evaluation Of Urban Space As A Concept Of Soundscape ................................................................. 743
   J. Y. Jeon, P. J. Lee

Effects Of Airplane And Helicopter Noise On People Living Around A Small Airport In Sapporo,
Japan .................................................................................................................................................. 752
   Tetsumi Sato, Takashi Yano

Effects of residential environmental factors on annoyance and activity disturbances caused by aircraft
and road traffic noises in Vietnam ....................................................................................................... 760
<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient Noise Doesn't Stop At 20 Khz</td>
<td>914</td>
</tr>
<tr>
<td>The Weight Of Evidence Approach In The Assessment Of Hearing Impairment Induced By Noise And Ototoxic Chemicals</td>
<td>915</td>
</tr>
<tr>
<td>Perceived Quality Of The Living Environment And Noise</td>
<td>921</td>
</tr>
<tr>
<td>Environmental Exposure – Annoyance Relationships In Black And Gray Urban Areas</td>
<td>929</td>
</tr>
<tr>
<td>Multi-Sensory Experience In Urban Historical Places</td>
<td>938</td>
</tr>
<tr>
<td>Influence Of Temporal Structure Of The Sonic Environment On Annoyance</td>
<td>945</td>
</tr>
<tr>
<td>Variation Of Evaluation Of Signal Sound In The Public Place With Several Kinds Of Noise</td>
<td>953</td>
</tr>
<tr>
<td>Noise And Health-Related Quality Of Life In People Living Near A Motorway</td>
<td>957</td>
</tr>
<tr>
<td>Aircraft Noise And Annoyance In The Populations Living Near The Ciampino Airport In Rome</td>
<td>962</td>
</tr>
<tr>
<td>Effect Of The Co-Exposure To Organophosphate Pesticides And Noise On The Auditory Function Of Farm Workers</td>
<td>966</td>
</tr>
<tr>
<td>Subjective Responses To Noise Levels In Inpatient Hospital Wards</td>
<td>974</td>
</tr>
<tr>
<td>A Pilot Study Of Noise Level In A Pharmacy Department In A Teaching Hospital</td>
<td>982</td>
</tr>
<tr>
<td>Getting It Together - Interdisciplinary Sound Environment Research</td>
<td>990</td>
</tr>
<tr>
<td>Progress On Noise Policies: 2008 - 2011</td>
<td>996</td>
</tr>
<tr>
<td>Health Costs Of Noise: What Have We Learnt From The Literature And Their Use In Noise Policy</td>
<td>1007</td>
</tr>
<tr>
<td>Development Of A State Planning Policy For Road And Rail Transport Noise – The Western Australian Experience</td>
<td>1008</td>
</tr>
<tr>
<td>A Meta-Analysis Of Stated Preference Studies Of Noise Nuisance</td>
<td>1016</td>
</tr>
<tr>
<td>Status Of International Consortium On Noise Issues In Developing And Emerging Countries</td>
<td>1033</td>
</tr>
<tr>
<td>The Review Of Market-Based Measures In Mitigating Aircraft Noise And The Applications For Taiwan</td>
<td>1040</td>
</tr>
<tr>
<td>Is Quiet The New Loud? Towards The Development Of A Methodology For Estimating The Economic Value Of Quiet Areas</td>
<td>1048</td>
</tr>
<tr>
<td>Noise Research &amp; Policy In The USA: Emerging From The Shadows</td>
<td>1058</td>
</tr>
<tr>
<td>Some Implications Of The Noise Policy Statement For England For The Regulation And Permitting Of Industry By The Environment Agency Of England And Wales</td>
<td>1065</td>
</tr>
<tr>
<td>Protection Against Aircraft Noise. Novella Of The German Law Of October 31, 2007</td>
<td>1073</td>
</tr>
<tr>
<td>Risk Management For Transportation Noise</td>
<td>1082</td>
</tr>
<tr>
<td>Integrating Noise Into Government Appraisal And Cost Benefit Analysis In The UK</td>
<td>1090</td>
</tr>
<tr>
<td>The Importance Of Clear Policy Objectives When Managing Noise</td>
<td>1098</td>
</tr>
</tbody>
</table>
Contribution To Meet New Requirements In Brazil For Protection Of Bedrooms Against External Noise: An Easy, Low Cost And Reliable Measurement In Dba To Estimate Sound Isolation Performance Of Windows

Joao Baring

The Assessment And Control Of Road Traffic Noise: A Comparison Between Irish And Australian Policy

E. A. King, J. Parnell, V. P. O'Malley

Management For Wind Turbine Generated Environmental Noise

Z. Kraskie

Residential Development Near Industrial Noise Emitters

Dani Fiumicelli, David C. Waddington

Contribution Of Genetic Factors To Noise-Induced Hearing Loss

Mariola Sliwinski-Kowalska

Night Noise And Sleep In Spain

S. Feijoo

Author Index