

NOISE/NEWS

INTERNATIONAL

Volume 16, Number 1
2008 March

*A quarterly news magazine
with an Internet supplement published
by I-INCE and INCE/USA*

■ **INTER-NOISE 09**
First Announcement

■ **INTER-NOISE 08**
Travel Planning

■ **NOISE-CON 08**
Travel Planning

■ **INTER-NOISE 07**
Report

■ Istanbul Workshop I

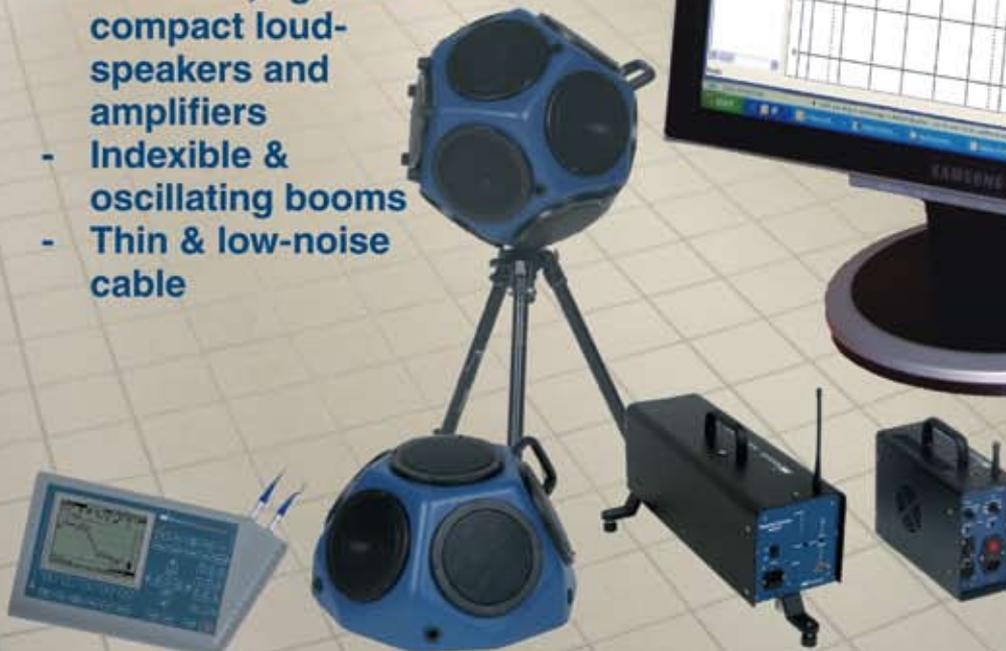
■ **MEMBER SOCIETY PROFILE**
Acoustical Society of China



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Canadian Museum of Civilization. Courtesy of Ottawa Tourism.

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NOISE/NEWS

INTERNATIONAL

The printed version of Noise/News International (NNI) and its Internet supplement are published jointly by the International Institute of Noise Control Engineering (I-INCE) and the Institute of Noise Control Engineering of the USA (INCE/USA).

I-INCE

The International Institute of Noise Control Engineering (I-INCE) is a worldwide consortium of societies concerned with noise control and acoustics. I-INCE, chartered in Zürich, Switzerland, is the sponsor of the INTER-NOISE Series of International Congresses on Noise Control Engineering, and, with the Institute of Noise Control Engineering of the USA, publishes this quarterly magazine and its Internet supplement. I-INCE has an active program of technical initiatives, which are described in the Internet supplement to NNI. I-INCE currently has 46 Member Societies in 39 countries.

INCE/USA

The Institute of Noise Control Engineering of the USA (INCE/USA) is a non-profit professional organization incorporated in Washington, D.C., USA. The primary purpose of the Institute is to promote engineering solutions to environmental noise problems. INCE/USA publishes the technical journal, *Noise Control Engineering Journal*, and, with I-INCE publishes this quarterly magazine and its Internet supplement. INCE/USA sponsors the NOISE-CON series of national conferences on noise control engineering and the INTER-NOISE Congress when it is held in North America. INCE/USA Members are professionals in the field of noise control engineering, and many offer consulting services in noise control. Any persons interested in noise control may become an Associate of INCE/USA and receive both this magazine and *Noise Control Engineering Journal*.

NNI Internet Supplement

www.noiseneewsinternational.net

- Links to the home pages of I-INCE and INCE/USA
- Abstracts of feature articles in the printed version
- Directory of the Member Societies of I-INCE with links, where available, to the Member Society Profiles and home pages
- Links to I-INCE Technical Initiatives
- Calendar of meetings related to noise—worldwide
- Links, where available, to NNI advertisers
- Links to news related to the development of standards
- Link to an article “Surf the ‘Net for News on Noise,” which contains links to noise-related sites—worldwide

International INCE Contributions to Global Noise Policy

The Technical Study Groups of International INCE have recently produced two reports related to a global noise policy. TSG#3, "Draft Survey of Policies and Regulations for Control of Community Noise," was circulated to the Member Societies of International INCE in July of 2007. Comments from the Member Societies are now being integrated into the document. When the report is approved by the Member Societies, it will be given wide circulation, and will contain a great deal of useful information. In addition to two appendices on European Union activities, it will contain information on noise policies and regulations in many countries around the world.

A second report by TSG#5, "A Global Approach to Noise Control Policy," has already been approved by the Member Societies of International INCE, and was published in the 2006 September-October issue of *Noise Control Engineering Journal*. The sections published in that issue have been combined into a single PDF file which is available to interested parties. The major sections of the report are on occupational noise, community noise, and consumer product noise. An extensive list of European Union standards is also included. In addition, there are descriptions of a large number of non-governmental and other organizations in a position to influence global noise policy.

In addition to these reports, there have been a number of workshops at International INCE-sponsored INTER-NOISE Congresses. In Prague, Czech Republic, in 2004 there was a workshop related to the activities of TSG #5 — the Group that produced the report described above.

The second workshop held in 2005 August in Rio de Janeiro, Brazil, addressed specific policy issues in South America, Europe, and the Far East. The third workshop held in Tampere, Finland, during 2006 May focused primarily on European noise policy and its links to global noise policy. At INTER-NOISE

07 in Istanbul, there was a workshop titled Public Pressure—An Effective Force.

Summaries of many of these workshops and the related discussion have been published in this magazine, the most recent being a summary of the first session of the Istanbul workshop.

There are many future challenges that we face in the noise control community; many of these relate to harmonization. It is unlikely that all *regulations* that deal with noise immission will be harmonized because of the many cultures and stages of development that can be found around the world. However, the *metrics* used to describe noise immission should be standardized, and this perhaps is best done by the International Organization for Standardization (ISO).

Standards for measurement of product noise emissions are best harmonized internationally by the ISO and the International Electrotechnical Commission (IEC), and there are many committees and working groups which have already produced such standards.

Regulations are another problem. To date the only product noise emission regulations that are being harmonized are in WP.29 of the United Nations Economic Commission for Europe (UNECE) and relate to vehicle noise emissions. Standards for other products have been developed in the European Union and in several countries, and are not yet subject to harmonization. I hope that the activities of International INCE will give some direction to this problem of international harmonization of noise emission regulations. ■



Hideki Tachibana
2008 I-INCE President

Making It Real



Paul R. Donovan

*Pan-American
News Editor*

An almost universal challenge in up-front noise control engineering is “making it real.” If noise control were truly free from cost and other trade-offs, this would not be an issue. Unfortunately, this is not the case and the burden often falls on the noise control engineer to demonstrate, in some fashion, the benefit or lack of benefit that will be realized by choices along the way of the product or project design.

In some cases, “making it real” should be easy; for example, when product specifications, building codes, or community regulations and policies are in place to address noise. Assuming that reliable modeling or prediction methods are in place (and this can be a big assumption), meeting the specified level will not necessarily achieve the desired end effect, particularly when the public and/or consumers are directly affected. A good example of this comes from the highway noise arena. In the USA, highway noise criteria typically consider worst hour L_{eq} at an A-weighted level approaching 67 dB as an appropriate criterion for *considering* noise abatement. Translating this one-hour level into a day-night level (L_{dn}) using typical diurnal traffic noise patterns and established relationships between transportation noise levels and annoyance, this is equivalent to an L_{dn} of about 69 to 70 dB. From typical level vs. annoyance curves, this is expected to yield about 20% highly annoyed people. Is it then reasonable to expect that if the policy limit is met that everyone will be satisfied? In this case, “making it real” should include working to the regulated limit along with an assessment of the expected number of people highly annoyed by the end design. If this were done, highway agencies would be better able to anticipate the reaction and avoid the potential for class action lawsuits after project completion.

If “making it real” is not exact when requirements exist, it is even more difficult and needed more when they do not. Examples of this are readily found in the product noise control arena, although I suspect there are many also in architectural noise control.

For products, of course, a big tool is competitive benchmarking. But even this has its pitfalls. What metric should be used? Is it overall level, some frequency-weighted index, a sound quality metric, or something else? With any of these comes the onus of relating the metric to the consumer and ultimately sales impact. Assuming that this can in fact be done through jury analysis or by relating consumer survey data to a metric, the next important ingredient is being able to predict the noise (level) and its effect throughout the design/decision process. In an ideal world, this would be done with sophisticated, accurate analysis tools. When these do not exist, we fall back to prototype development and past experience. Assuming that predictions can be made, conveying the message in “dB’s,” sones, roughness, or some other metric, only works if the decision makers are well-trained in these metrics. Since this is usually not the case, it comes down to translating the noise metric into what it really means to the product in terms of sales, complaints, customer satisfaction, etc.

As engineers, translating our results into non-technical “soft” terms is often difficult, and uncomfortable. However, to get the results implemented and truly understood, such translation is a critical element of noise control engineering. Whether making the results real requires estimating percent highly annoyed, audio demonstrations, estimated lost sales, etc., it is all part of providing decision makers the “data” to make the most informed choices. As such, it is also a key element of being a noise control engineer and can also be one of the most challenging and rewarding aspects of this profession. 

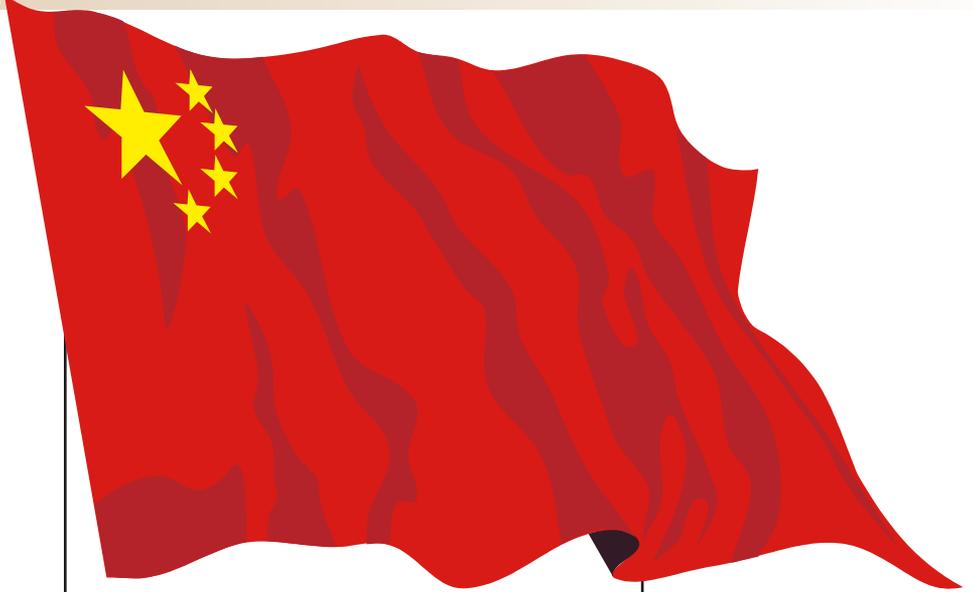
Member Society Profile

The Acoustical Society of China

Dedicated to the development and exchange of knowledge, the Acoustical Society of China (ASC) was founded in 1964 as the Society of Acoustics. In 1978, the Applied Acoustical Society was organized as a branch of the Chinese Institute of Electronics. The two societies merged in 1985 to strengthen their objective to promote awareness of the field. The society has grown to over 3600 members and 45 institutions and companies, which serve as sustaining members, making ASC China's premier professional society in acoustics.

Outreach has always been an important part of the society's mission. It regularly sponsors or co-sponsors international conferences, including the upcoming 37th International Congress and Exhibition on Noise Control Engineering. The Congress, more colloquially known as Inter-Noise 2008, will be held 26-29 October in Shanghai. The society was also a co-organizer of the 2007 Japan-China Joint Conference on Acoustics and the 2000 International Congress on Spoken Language Processing. The society also organized the 16th International Congress on Noise Control in 1987. It has published three professional journals, including the *Chinese Journal on Acoustics* in both English and Chinese, *Applied Acoustics and Noise*, and *Noise and Vibration Control* (Chinese only).

To ensure adequate attention to the many areas of acoustics, ASC has nine technical committees or subdivisions focused on the following thematic areas: physical, underwater, environmental acoustics, audio engineering, speech/hearing and music acoustics, biomedical ultrasonic engineering, detection ultrasonics, sono-electronics, and macrosonics. The society also has several working councils to respond to its various affairs: scientific communications, scientific popularization, organization, international affairs, technical consultants, and youth affairs. Local committees are located in 12 different provinces and cities around the country.



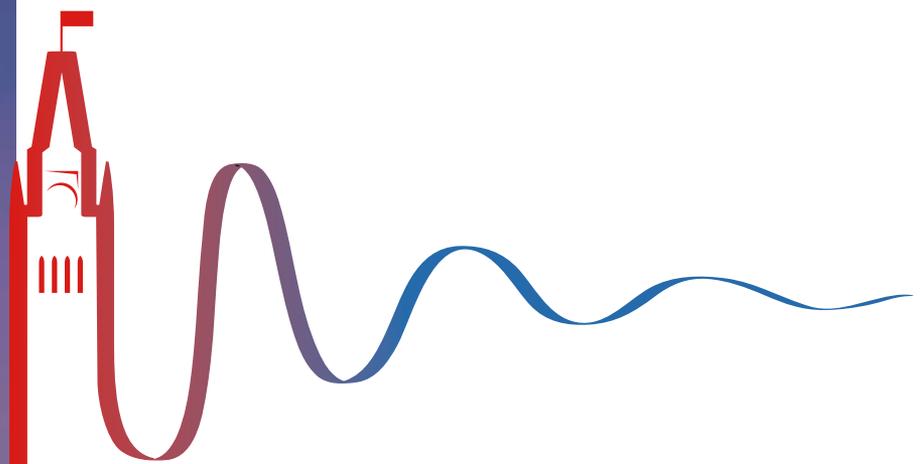
The Administrative Secretariat of ASC has been located in the Institute of Acoustics, Chinese Academy of Sciences (IACAS), since the two acoustic societies merged more than 20 years ago. Affiliation with IACAS strengthens the society's credibility. IACAS has earned 33 national awards and more than 250 patents, many in fields relative to acoustics.

Email inquiries can be sent to: asc@mail.ioa.ac.cn. The Society also maintains a Web page in both Chinese and English: www.asc.ioa.ac.cn. The group's current slate of officers includes: Jing Tian, ASC president and president of the 2008 Inter-Noise Congress; Desen Yang, Jian Zong, Menglu Qian and Jianchun Cheng, vice presidents; Chunhua Zhang, secretary-in-general; and Ziaojun Lio, associate secretary-in-general.

More information on Inter-Noise 2008, "From Silence to Harmony," is available at the Congress Website: www.internoise2008.org, and in this issue of NNI. 

This is the 61st in a series of articles on the Member Societies of International INCE.

Member Society Profile is a regular feature of the Noise News International. If you would like to have your society featured, please contact George Maling at inceusa@aol.com.



inter·noise 2009

innovations in practical noise control

2009 August 23-26 — Ottawa, Canada

Ottawa, Canada, will be the setting for the 38th International Congress and Exhibition of Noise Control Engineering (Inter-Noise 2009). The annual Congress opens 23 August with a special ceremony, lecture and reception, and continues through 26 August. Several plenary sessions and hundreds of papers on various aspects of noise control will be presented during the four-day event. A large vendor exposition will be held during the congress and the ACTIVE09 Symposium will be held immediately before the congress.

Inter-Noise 2009 is being jointly organized by the Canadian Acoustical Association (CAA) and the Institute of Noise Control Engineering-USA (INCE-USA). Trevor Nightingale, CAA, and Joe Cuschieri, INCE-USA, are serving as co-presidents. The technical program, which will focus on the theme of "Innovations in Practical Noise Control," is co-chaired by J. Stuart Bolton, Purdue University, and Brad Gover, National Research Council of Canada. Richard J. Peppin is the exposition manager.

The Congress will feature three plenary lectures by pre-eminent noise control engineers. The technical program will emphasize all areas of noise control including active noise control, building and room acoustics, community and environmental noise, computational methods in acoustics, and passive noise control materials and methods. Other topics to be addressed are shock and non-linear acoustics, signal processing, structure-borne sounds (including fluid/structure interaction), subjective response to sound, transportation noise, underwater acoustics, and vibration and modal analysis. The technical committee is working on a list of structured sessions. Persons wishing to organize a structured session should contact the technical co-chairs directly or via the Congress Web site. The official language of the congress will be English.



A highlight of Inter-Noise 2009 will be the Congress Banquet, which is scheduled for 25 August at the Canadian Museum of Civilization. Prior to the banquet, participants will be able to explore several exhibits that feature artifacts of aboriginal peoples in Canada.

A tentative schedule for the abstract and paper submission process has been set. The dates are: abstracts due, 23 January 2009; notification of acceptance, 20 March 2009; and papers due, 22 May 2009. A slight adjustment to the schedule is possible. Prospective participants should regularly visit the Congress Web site for the most updated information. The Web address is: www.internoise2009.com.

The 2009 International Symposium on Active Control of Sound and Vibration (Active 09) will be held 20-22 August, just prior to the InterNoise Congress. The ACTIVE symposia gather together international experts in active control of sound and vibration and are held every 2 or 3 years. Active09 will

feature five plenary speakers and three parallel technical sessions following the plenaries.

The Ottawa Westin is the primary venue for the Congress and the ACTIVE09 symposium. All lectures and posters will be presented at this property. The Westin is a four-star, non-smoking hotel with nearly 500 guest rooms and many suites. Located in the heart of Ottawa with picturesque views of the Rideau Canal the hotel is close to all major downtown attractions, including the Parliament Buildings, National Gallery and Royal Mint. The hotel is attached by a walkway to the renowned Rideau Shopping Centre. The ByWard Market, a great source for dining and entertainment, is a short five-minute walk. Special guest room rates have been negotiated. Information on rates and a list of other area hotels will be available on the Congress Web site.

Inter-Noise 2009 will offer a fee-based program for accompanying persons that will include guided activities that showcase the Ottawa area. For

pre- and post-Congress activities, the immediate area offers a full range of recreational opportunities including hiking, biking, boating, golf, whitewater rafting, hang-gliding and more.

Travel to Ottawa, the capital of Canada, is easy. The newly renovated airport is served by 10 major U.S. hubs with non-stop daily flights. Flights from several European and Asian cities are also available. The hotel venue is a short trip by taxi or shuttle. Entry into Canada may require a passport and/or visa. Participants are encouraged to check with the appropriate embassies.

In Ottawa, most people in the tourism and service industries speak both English and French.



inter-noise 2008

From Silence to Harmony

**37th International Congress and Exposition on Noise Control Engineering
26-29 October 2008-Shanghai-China**

Dear Colleagues:

INTER-NOISE 2008, the 37th International Congress and Exposition on Noise Control Engineering, will be held in Shanghai, China on 26-29 October 2008. The Congress is sponsored by the International Institute of Noise Control Engineering (I-INCE), co-organized by the Acoustical Society of China (ASC) and the Institute of Acoustics, Chinese Academy of Sciences (IACAS). The organizers warmly invite and welcome all the prospective participants around the world coming to join us in Shanghai and to communicate in the up-to-date advancements in noise and vibration control engineering. The theme of the Congress is "From Silence to Harmony". Technical papers around that theme will be accepted with special acknowledgement. Papers in all fields of noise and vibration will also be welcome.



Shanghai is the most dynamic city in China. It is a historical city, a cultural centre, and an international metropolis in China's modernization drive. In the city, you will find all the contrasts of modern China, teeming neighborhoods and birch trees are woven together by elevated highways and modern skyscrapers. It will also be proved that Shanghai is the most appropriate and pleasant venue for the Congress.

The Congress will feature a broad range of high-level technical papers from around the world. The distinguished lecturers will present brilliant stimulations for our technical sessions and some discussions with a focus on the Congress theme. Meanwhile, extensive exhibitions of noise and vibration control technology, measurement instrumentation and equipment, various social activities will be provided. At the Congress, you will exchange academic information with international colleagues, find further development opportunities for noise and vibration control engineering in China's enormous and ceaselessly growing markets.

With your participation, INTER-NOISE 2008 will prove to be a very exciting event, a worthwhile opportunity to promote the scientific research and development of Noise Control Engineering in various respects.

We are looking forward to meeting you in Shanghai.

Prof. Dr. Jing Tian
President of INTER-NOISE 2008 Congress

Travel Planning

Congress Secretariat

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General Information

INTER-NOISE 2008, the 37th International Congress and Exposition on Noise Control Engineering, will be held in Shanghai, China on 26-29 October 2008. The Congress is sponsored by the International Institute of Noise Control Engineering (I-INCE), co-organized by the Acoustical Society of China (ASC) and the Institute of Acoustics, Chinese Academy of Sciences (IACAS). The theme of the Congress is "From Silence to Harmony." The Congress web site is www.internoise2008.org. The INTER-NOISE 2008 Congress will take place at Shanghai International Convention Center (SHICC), i.e. Oriental Riverside Hotel. Congress registration will be at the SHICC, and will be open from 10:00 – 20:00 on Sunday, October 26. The opening ceremony and welcome reception will be held at the SHICC on the same day from 16:00 to 19:30.



Congress Venue

The INTER-NOISE 2008 Congress will take place at the Shanghai International Convention Center (SHICC), i.e. Oriental Riverside Hotel, located at the heart of Lujiazui-Shanghai's Financial & Trade Zone and southwest to the Oriental Pearl TV Tower. It is accessible from all parts of the city with various modern forms of transportation.

With the capacity of 3000 persons, Grand Ballroom on the 7th floor is the largest pillar-less ballroom in Shanghai, the banquet of INTER-NOISE 2008 will be held there. 25 additional meeting rooms are located on the 3rd and 5th floor with seating capacity from 25 up to 800 persons.

Technical Program

Information on the technical program, including some structured sessions on a very wide variety of topics in noise control engineering, have been posted on the Congress web site. Other structured sessions are being planned. In addition, there will be four plenary distinguished lecturers:

1) Binaural Hearing Mechanism

Steve Colburn (Biomedical Engineering Department, Boston University, USA)

2) Noise Sources and Virtual Noise Synthesis

Goran Pavic (Laboratoire Vibrations Acoustique, INSA de Lyon, France;)

3) Microperforation Research for Sound Absorption and Noise Reduction

Jing Tian (Institute of Acoustics, Chinese Academy of Sciences, China)

4) Evaluation and Control of Acoustical Environments in 'Green' (Sustainable) Buildings

Murray Hodgson (School of Occupational and Environmental Hygiene & Department of Mechanical Engineering, University of British Columbia, Canada)



Congress Registration

Congress Registration

For congress registrations, the Online Registration Form on the congress website should be completed and returned together with the payment to the Congress Secretariat. After receipt of the form plus payment, the participant will be officially registered and will receive an invoice/confirmation. Please bring this confirmation with you to the Congress registration desk at the Shanghai International Convention Center (SHICC). The following registration fees are applicable to the participants of Inter-Noise 2008 Congress:

Classification	Payment Before May 01, 2008	Payment Between May 01 – Oct. 15, 2008	Payment After Oct. 15, 2008
Congress Registration	400 Euro	450 Euro	500 Euro
Student Registration *	200 Euro	225 Euro	250 Euro
Accompanying Person	75 Euro	100 Euro	125 Euro
Additional Paper	50 Euro	50 Euro	50 Euro

* The proof of official student certificate must be sent to the Congress Secretariat.
All parties are responsible for the payment of bank charges within their own countries.

Registration fees of participants and students include:

- Attendance to the Congress and Exhibition
- Coffee Break and light lunch for three days
- Participation in the Opening and Closing Ceremonies and Welcome, Farewell Receptions
- Printed Booklets of Final Program, Abstracts, Exhibitor Directory
- Proceedings CD
- Bag and badge

Registration fee of accompanying persons includes:

- Participation in the Opening and Closing Ceremonies
- Participation in the Welcome, Farewell Receptions
- Badge, Shanghai brochure

Payment

The registration fee should be remitted in Euro in one of the following ways:

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Municipal Branch Xindongan Sub. Branch
Account No.: 0200236319000047124
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Swift Code: ICBKDEFF
Address of the Bank: No. 257. Wangfujing Avenue, Dongcheng District, Beijing, China
Bank charges are the responsibility of the payee and should be paid at source in addition to the rental fees.
Please write your name and "INTER-NOISE 2008" on your bank transfer.

Credit Card:

INTER-NOISE 2008 authorize Dynasty International Travel Co., Ltd to receive payment from your credit card. The Dynasty International Travel Co., Ltd only accepts Master Card and Visa Card. It will be billed in Chinese RMB. Consequently, the amount charged to your account may vary due to fluctuation in exchange rate. The total amount should be added by 4% for bank charge.

Please access website at <http://reg.internoise2008.org/registration/index.asp> and fill out the Authorization Form completely and mail or fax it immediately to INTER-NOISE 2008 Congress Secretariat, 21 Beisihuanxilu Road, Haidian district, Beijing, P.R. China, 100080, Fax: +86-10-62654079

Important Notice

1. In order to avoid any trouble in money transfer, please do send a copy of your remittance invoice or receipt together with your Registration Form
Fax: 86-10-62654079.
For more information please contact INTER-NOISE 2008 Secretariat at in08@mail.ioa.ac.cn
2. No personal check is acceptable for the payments in advance.
3. Bank transfers must be net and exclusive of any banking charges.
4. Participants making payment by bank transfer are kindly requested to state clearly on the bank order which items these charges include: Registration, hotel deposit, exhibition, daily city tours, pre & post Congress tour.
5. After receipt of the form of payment, the participant will be officially registered and will receive an invoice/confirmation. Please bring this confirmation with you to the Congress registration desk at the Shanghai International Convention Center (SHICC).

About Shanghai City



About Shanghai City

Shanghai is the biggest city and the largest commercial, trade and financial center in China. It occupies a total area of 6,341sq.km. with a total resident population of 16,000,000. Shanghai is a gate to the Yangtze River delta. It is an important hub of communications with an easy access to the outside world by all means of transport: ocean, offshore and inland water shipping, highway and railroad transport, air flights etc. It has a pleasant climate, with four distinct seasons. The average temperature is around 18°C.

Shanghai is well known in the world not only for its prosperous cosmopolitan feature but also for its rich humanistic resources. In recent years, a number of modern buildings have been added to the city, such as the Oriental Pearl TV Tower, Shanghai Museum, Shanghai Library, Shanghai Stadium, Shanghai Grand Theatre, Shanghai Circus City, Shanghai City-Planning Exhibition Hall and Jin Mao Tower, Shanghai Science & Technology Museum. They have become new scenic sights in Shanghai.

Shanghai is an ideal "paradise for shoppers." There are commercial streets and shopping areas like the famous Nanjing Road Pedestrian Mall, Huaihai Road, Sichuan Bei Road, Yuyuan Commercial and Tourist Area, the Ever Bright Commercial City, Xujiahui Commercial City and Zhangyang Road Commercial City in Pudong. There, shops stand rows upon rows with large collections of beautiful commodities, meeting the needs of tourists of different levels. Shanghai is also the paradise for gourmets. There are over a thousand restaurants serving the 16 different styles of food in China, such as the Beijing, Sichuan, Guangdong, Yangzhou, Fujian, etc. There are Western restaurants serving French, Russian, Italian, English, German, Japanese and Indian food and also Muslim and vegetarian food. In Shanghai, one can have a taste of all the delicacies in the world. Shanghai is well developed in communications by land, water and air. There are over 40 Chinese and foreign air companies opening about 300 air routes dispatching from Shanghai. Shanghai Railway Station dispatches everyday 80 pairs of trains back and forth from Shanghai. There are the Shanghai-Nanjing, Shanghai-Hangzhou-Ningbo Freeways. The Pudong International Airport has opened for traffic. Its annual passenger transport volume will be 20,000,000 person/times. Plus that of the Hongqiao International Airport, it will be 30,000,000 person/times. Subways No.1-9 and the light-rail first phase project are in operation. Together with the 10 special tour bus lines connecting Shanghai with neighbouring tourist areas, they will render faster service and more convenience in urban communications to tourists. The magnetic buoyant train has been opened to the public. It offers travelers a zero height of flight at 430 km/hr.

Travel to Shanghai City

Travel Arrangements

For your air trip arrangements to/from China, you may contact Dynasty International Travel Co. Ltd., the appointed PCO for INTER-NOISE 2008, via z_ty728@yahoo.com.cn. Please quote the phrase "Attn: INTER-NOISE 2008 Travel Arrangements" as subject of your message.

Passport and Visa

International participants need a valid Passport and Visa for their trip to China. As soon as the Congress Secretariat receives the Registration Form and the related fees from participants and their accompanying persons, they will be sent an e-mail with an invitation to help them get a Visa from their local Chinese Embassy or Consulate for entrance into China. In addition to a Visa, participants from some countries are required to have a Chinese Green Card. Inquire at your local Chinese Embassy or Consulate for details about this Green Card.

In order to assist you filling out the Visa Application Form obtained from your local Chinese Embassy or Consulate, the name and mailing address of the Congress inviter and contacting person, contacting phone number, email address are provided as following,

Name of Inviter: Prof. Dr. Tian Jing, President of INTER-NOISE 2008 Congress

Contacting person's name: Ms.Li Ying

Contacting address: Institute of Acoustics, Chinese Academy of Sciences
21 Beisihuanxilu Road, Haidian District, Beijing, 100080, P.R. China

Phone number: +86 10 62553765

Fax: +86 10-62553898, +86 10-62654079

Email: liy@mail.ioa.ac.cn or in08@mail.ioa.ac.cn

Arrival in Shanghai

Taxi: Shanghai has several big taxi companies that have their own color schemes. Dazhong Taxi Company paints their cars sky blue, Qiangsheng orange, Jinjiang white, Bashi green and Nonggongshang blue. Of the taxi companies, Dazhong and Qiangsheng are the best. Taxi service is available at Shanghai Pudong International Airport the whole day. The cost from the airport to the selected hotels is about 15 EURO, or RMB 150 Yuan enclosed the extra highway fee 10 Yuan/car. Please do ask for the receipt from the driver. Payment should be made in RMB cash. You can use the ATM's or bank offices at the airport to get change. It is not customary to tip drivers. Please pay strictly accordingly to the meter in the taxi.

Shuttle Bus: You can take the airport shuttle bus Line 5 or 6 (running from 8:00am to 23:00pm at the No. 9 exit of the Pudong airport) to the Dongfang Hospital. From there, it will be a short taxi ride to the hotel (RMB 15).

There is no shuttle bus between Hongqiao airport and hotel. From the Hongqiao airport to the hotel, we suggest that you take taxi, and it will cost you about RMB 200.

The Local Organizing Committee (LOC) for INTER-NOISE 2008 Congress has selected 8 hotels near the Shanghai International Convention Center (SHICC). LOC will arrange Congress shuttle bus between the hotels and the SHICC during the Congress.

Accommodations

Accommodations

The Local Organizing Committee (LOC) of INTER-NOISE 2008 has selected 7 hotels offering pre-negotiated prices near the Congress Venue, the Shanghai International Convention Center (SHICC). The Congress shuttle buses will be arranged between the hotels and the SHICC during Oct. 26-29, 2008.

A sufficient number of rooms have been reserved at selected, international standard category hotels in Shanghai. Special reduced rates have been obtained and guaranteed for the INTER-NOISE 2008 Congress participants, which may be applied only if booked by filling in the Online Registration Form on the Congress web site.

All Congress participants will be kindly asked to pay their deposits for their booked rooms which are only charged for one night to the Congress Secretariat, but not to the hotel. The Congress Secretariat will deliver their reservation information and deposits to the hotel. Their accommodation fee should be settled with the hotel's cashier. The hotel may ask them pay more deposits covering the total period of the stay when they check in. They may not get rooms with the pre-negotiated rates given on the conference web if they book rooms directly from the hotel.

Booking

Accommodation will be allocated on "first come, first served" basis. As October is Shanghai's high season, early booking is highly advised. No accommodation booking can be guaranteed unless it is accompanied by a mandatory deposit of one night per room in three weeks just after sending reservation information by the Online Registration Form. For the payment procedure of balance due, please check the updates on the related part of the Congress web site. Non-payment until September 15, 2008 will result in automatic cancellation of the confirmed booking without any further notification. If there are no rooms left in the hotel category chosen, the Congress Secretariat reserves the right to allocate a room in another hotel of the same category or similar.

Name Badges

Admission to the scientific and social activities of the Congress is only possible for those persons wearing the official Congress name badge issued at the registration desk. For some activities and tours, tickets will be also provided.

Cancellation and Refunds

If you have registered for Inter-Noise 2008 and are unable to attend, you may transfer your registration to another individual. If this is not an option for you, the refund policy is listed as follows:

- 1) Any cancellation notice in writing must be sent to the INTER-NOISE 2008 Congress Secretariat by fax.
- 2) If the cancellation notice in writing is received by the INTER-NOISE 2008 Congress Secretariat before or on Sept.15 2008,
 - 100% of registration fee less administrative fee of 60 Euro,
 - 100% of hotel reservation fee (if any) ,
 These fees will be refunded, but bank charges will be deducted from the refunds.
- 3) If the cancellation notice in writing is received by the INTER-NOISE 2008 Congress Secretariat after Sept.15 2008, the registration fee will not be refunded. 100% of hotel reservation fee (if any) after deducting one night room rate will be refunded, but bank charges will be also deducted from the refund.

Note: Refunds will be issued after the Congress. Bank charges will be deducted from the refund. Refunds will be paid in Euro.

Hotel List

Hotel	Rating	Room type	Price per night (EURO/night)	Distance
Shanghai Oriental Riverside Hotel	★★★★★	Garden view (king or twin)	165	In the same building of SHICC
		River View (king or twin)	188	
Purple Mountain Hotel	★★★★★	Deluxe (king or twin)	136	15 mins by bus
		Executive-king	160	
Courtyard By Marriott Shanghai-Pudong	★★★★★	Deluxe (king or twin)	105	15 mins by bus
Supreme Tower	★★★★★	Single room (one bed)	80	15 mins by bus
		Twin beds room	88	
Eversunshine Hotel	★★★★☆	Duplex Suite Superior-king	62	10 mins by bus
Shanghai Changhang Merrylin Hotel	★★★	Common (king or twin)	54	15 mins by bus
Renhe Hotel	★★★	Ordinary sign room (king or twin)	44	15 mins by bus
Motel 168	★★	Twin beds room	25	15 mins by bus

Additional Information

Exhibition and Sponsorship

The Congress will also provide an extensive exhibition of noise and vibration control technology, measurement instrumentation, equipments and softwares. For downloading the exhibition and sponsorship prospectus and the application forms, please access the congress website: <http://www.internoise2008.org/Exhibition.htm>. For any questions and queries about the exhibition and sponsorship opportunities, please contact the Congress Secretariat: in08@mail.ioa.ac.cn.

Weather and Dress

Shanghai has a pleasant climate, with four distinct seasons. October is the best month for weather conditions in Shanghai. Typically, it is neither hot nor cold - just the perfect time to stay and visit in Shanghai and elsewhere in China. The average temperature in Shanghai in October is 18°C (66°F). The average highest temperature is 22°C (72°F) and the average lowest temperature is 15°C (59°F). Bring light autumn clothing, sweater and a jacket or coat for windy and cool evenings.

Customs

Information about Chinese customs is available from your local Chinese Embassy or Consulate or your travel agency.

Local Time

Local Time Standard time zone (UTC/GMT +8 hr) and no daylight saving time (+0 hr) give a time zone offset of GMT +8 hours.

Weights and Measures

China follows the metric system for weights and measurements.

Insurance

The Congress Organizers recommends participants to possess travel, property medical or other necessary insurances before coming to China. The INTER-NOISE 2008 Congress Organizers cannot be held responsible for the costs resulting from personal accidents or property loss during the Congress.

Food and Drink

Shanghai, with so many business people rushing in, is not only China's economic and cultural center, but also a "Grand View Garden" for dinners of all tastes. Different styles of cuisine meet and merge in Shanghai only to create the so-called Shanghai style cuisine, influenced by Beijing cuisine, Yangzhou cuisine, Guangdong cuisine and Sichuan cuisine, together with the foods of Suzhou, Wuxi, Ningbo and Hangzhou flavors, making Shanghai an ideal "gourmet kingdom". In addition, there are gourmet streets in the city that international tourists may never forget--Yunnan Road Gourmet Street, Zhapu Road Gourmet Street and Old Town Bazaar which are famous for local snacks, dishes and dim sum. Foreign style restaurants and coffee shops are found all over the city, among them are French, Russian and German a la Carte restaurants, American fast food restaurants, Italian Pizza Huts, Japanese Sushi bars, Korean BBQ houses, as well restaurants of Indian, Vietnamese, Thai and Mexican flavors. Shanghai restaurants will surely satisfy you with a great variety of nice food.

Dining-rooms with different styles are located in the Shanghai International Convention Center and neighboring hotels. These restaurants provide Chinese food, Western food, and Islamic food 24 hours a day. Coffee houses and Bars in the Center will also serve attendees. Participants can taste many kinds of Shanghai style food at restaurants in the vicinity of the Center.



Communications

China Mobile Communications Corporation ("China Mobile" for short) and China Unicom Limited ("China Unicom" for short) are the most important telecom service providers. With more than 170 million customers, China Mobile is the largest GSM operator in the world. China Mobile is reputed for some brands like GoTone, Easy-own and M-Zone, and providing telecom services. China Unicom is reputed for some brands like "Ru Yi Tong" (GSM Prepaid Service) and "Unicom Horizon" (CDMA Postpaid Service). Besides, the free 24-hour hot lines 10086 (China Mobile) and 10010 (China Unicom) for the customer service are prepared for your consultation to answer all your questions at any time. Please consult your local GSM operator to find out whether they have a roaming service agreement with Chinese operators.

Making a telephone call - local, long-distance or international - is very easy in China. The phone booths and other public telephones can be easily found on the roadside, hotels, railway stations, airports and large-scale emporia. Most of the public telephones in China are operated by inserting a phone card, whose par value ranges from 20 to 200 Yuan. There are also other stationary telephones offered by the peddlers of the small roadside shops and here you should pay cash. Phone costs vary depending on the carrier - China Telecom, China Netcom, China Tietong as well as the place and the length of the call. IP phone cards can save you much if you make the long-distance calls. If you call overseas, do please dial the international prefix '00' first, and then the country code, area code and the telephone number of your destination.

Additional Information *continued*

Water

It is not recommended to directly drink the water from the tap in your hotel room. If you want to drink cold water, it is best to order or buy bottled water, mineral or distilled. Avoiding the ice cubes being made from tap water is also recommended.

Upon request, hotels will provide containers of hot or chilled drinking water in the sleeping rooms at no extra cost. Hotels will also provide an electrically heated kettle to boil water from the tap in your room. The boiled water can then be stored in a vacuum thermos for drinking. Some hotels also provide a special tap in the lavatory that delivers a flow of purified water for drinking or taking medications.

This advice also applies to your pre-Congress or post-Congress travel in others cities in China, such as Beijing, Xi'an and Guilin.

Voltage, Socket and Plugs

The electrical current in China is 220-volts, 50Hz A/C. Hotels generally provide wall sockets in every room, accommodating both the standard "Flat blade attachment plug (Type A)" and common "Oblique flat blades with ground (inverted V) plug (Type I)" as well as the not-so-common "Round pin attachment plug (Type C)". There are photos on the Congress web site.

Language in China

Chinese is the official language of China. In China, English is the most widespread foreign language. In areas to be visited by tourists it is easy to find many bilingual citizens.

Currency Exchange

The currency in circulation in China is the Chinese yuan, or RMB yuan, whose international standard abbreviation sign is CNY. 1 CNY consists of 10 jiao (dimes) or 100 fen (cents). The denominations of the Chinese yuan in bank notes are 1, 2, 5, 10, 50 and 100 CNY. Participants can exchange their currencies at airports, major hotels and banks in China. The exchange rate will be given daily by the Bank of China. Currently, 1 EUR can be exchanged for about 10 CNY. All currency exchange receipts should be saved in case participants want to exchange RMB back to their own currency. Banks may demand to see the original exchange receipt.



Shopping in Shanghai

Shanghai has been famed as "the Shopping Paradise" and "the Oriental Paris" in history. Visitors come to Shanghai with a purpose of appreciating the beautiful urban scenery, as well as shopping in its various kinds of shops and stores. Nanjing Road, China's No.1 Commercial Street, is a must for all visitors; Huaihai Road, an elegant and cultural commercial street, attracts thousands of young people who search for the latest fashion trends, and Sichuan Road, a popular commercial street, is specially favored by the working classes. In addition, the modern Xujiahui Commercial Town, the traditional Yu Yuan Bazaar, the Kerry Ever Bright City near the exit of the Shanghai Railroad Station are all prime locations for avid shoppers. Special shopping streets and markets are also found in Shanghai, such as the cultural street Fuzhou Road, where book stores are closely lined one after the other, including the famous Shanghai Book Town, Science and Technology Book Shop, Ancient Book Shop, etc. Hundred-year-old stores and shops that sell local special products and are well-known at home and abroad can be found in good locations. The long-famed Beijing Da Ren Tang Chinese Medicine Store, Yellow-Star Fan Shop, Hengdali Watch & Clock Co. can all be easily found in Shanghai. Shanghai is also famous for its great variety of local special products and artistic handicrafts. The Shopping tour, one of the purposes of domestic and international tourists who come to Shanghai, has become one important part of the city's urban style tourism.



Optional Tours

The tours arrangements listed below will offer you a very good opportunity to appreciate Chinese culture, ancient civilization, people's daily life and traditions. In order to ensure your participation, it is recommended to make a reservation on the Registration Form. For more tour information, please view the website at www.chinaguide.net.cn/internoise2008 or contact travel service agency by z_ty728@yahoo.com.cn directly.

Local Tours in Shanghai

LT1 Zhujiujiao water town and the Oriental Pearl TV Tower

Date: October 27, 28 and 30, 2008 (08:30-17:00)

Price: 40 EURO per person

LT2 The Lingering Garden and The Master of Nets Garden

Date: October 27, 28 and 30, 2008 (08:30-17:00)

Price: 50 EURO per person

LT3 Yu Garden and Jade Buddha Temple and Shanghai Urban Planning Exhibition Hall

Date: October 28, 29 and 30, 2008 (08:30-17:00)

Price: 40 EURO per person

LT4 The Shanghai Museum

Date: October 27 and 29, 2008 (08:30-12:00)

Price: 20 EURO per person

EP1 Acrobatics

Date: October 27 and 30, 2008 (18:00-22:00)

Price: 25 EURO per person

EP2 Cruise on Huangpu River

Date: October 27 and 29, 2008 (18:30-20:30)

Price: 20 EURO per person

Notes

1. You could make a booking in Shanghai International Convention Center (SHICC) when registration.
2. The local tours and evening program fee includes air-conditioning coach, English-speaking guide and admission fee.
3. All optionally local tours will start from and end at the Congress Center, if not specified otherwise. Please arrive at the Shanghai International Convention Center (SHICC) five minutes before departure.

	LT1	LT2	LT3	LT4	EP1	EP2
Oct. 27	●	●		●	●	●
Oct. 28	●	●	●			
Oct. 29	●		●	●		●
Oct. 30	●	●	●		●	●

Pre- and Post Congress Tours

PRT1 Guangzhou-Guilin-Xi'an-Shanghai

Dates: Oct. 21–26, 2008 (6 Days, 5 Nights)

Price: Single room EURO 730 per person
Double room EURO 680 per person

PRT2 Beijing-Shanghai

Dates: Oct. 23–26, 2008 (4 Days, 3 Nights)

Price: Single room EURO 420 per person
Double room EURO 350 per person

PRT3 Shanghai-Xi'an-Shanghai

Dates: Oct. 23–26, 2008 (4 Days, 3 Nights)

Price: Single room EURO 510 per person
Double room EURO 460 per person

PT1 Shanghai-Xi'an-Beijing

Dates: Oct. 30–Nov. 4, 2008 (6 Days, 5 Nights)

Price: Single room EURO 600 per person
Double room EURO 560 per person

PT2 Shanghai-Beijing

Dates: Oct. 30–Nov. 2, 2008 (4 Days, 3 Nights)

Price: Single room EURO 420 per person
Double room EURO 350 per person

PT3 Shanghai-Guilin-Beijing

Dates: Oct. 30–Nov. 4, 2008 (6 Days, 5 Nights)

Price: Single room EURO 720 per person
Double room EURO 640 per person

Notes

1. The tour fee includes domestic air ticket, inter-city transportation, hotel (three star or above), regular meals, cruise fee, admission fees, and an English speaking guide.
2. The detailed information of flight and hotels will be available by Sept. 25.
3. If no roommate name is indicated in your registration form, your room will be arranged as a single room during the tour.
4. You can arrange the continuing flight from the tour end city by yourself. If necessary, we could assist you.
5. If the attendees are fewer than 10 persons, the organizers will keep the right to raise the prices or cancel any of the above routes. In that case, the notification will be sent to you as soon as possible and the tour fee will be fully refunded. If you cancel the tour booking 14 days prior to departure, 10% will be charged as an administration fee. Otherwise, no refund can be obtained.
6. For further information on optional tours, you can consult our professional guides at the Tours and Travel Desk open in the lobby of the Congress venue (SHICC) on October 26 between 10:00 and 20:00 and from October 27th to 29th between 08:00 and 18:00.



ICBEN 2008



Noise as a Public Health Problem

The 9th Congress of the International Commission on
Biological Effects of Noise (ICBEN)

Mashantucket, Connecticut, USA
July 21-25, 2008

Who Should Attend

Researchers, policymakers, and anyone with an interest in the impact of noise on public and industrial health

Conference Location

Grand Pequot Convention Center, Foxwoods Resort, 10 miles north of Mystic, Connecticut. Recommended airport: Providence, Rhode Island (PVD).

Accommodations

Grand Pequot Tower – special low rates, free high-speed internet, free valet parking. Mystic has many other hotels, but they all require the use of vehicles

Scientific Program

Noise-Induced Hearing Loss
Noise and Communication
Non-auditory Physiological Effects of Noise
Influence of Noise on Performance and Behavior
Effects of Noise on Sleep
Community Response to Noise
Noise and Animals
Noise Policy

Accompanying Persons

Accompanying person's will attend the Reception and the Banquet and will be offered the opportunity to tour such nearby attractions as the
Mystic Seaport
Mashantucket Pequot Museum
Newport Mansions
Submarine Museum
Mystic Aquarium
Local Beaches, and many others

For Further Information

For registration inquiries, abstract forms, and further announcements, contact icben2008@sbcglobal.net

LISTEN ...



THERE'S A BETTER NOISE CONTROL SYSTEM.

SoundPLAN, the benchmark noise planning and mapping software, continues setting the pace. SoundPLAN 6.4 has greatly improved handling for huge projects. **SoundPLAN-essential**, the compact version, is for occasional users and less complex jobs.

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GLOBAL: We have 30+ distributors worldwide. Our software is available in English, Asian & European languages.



Available from the INCE/USA Page at the Atlas Bookstore

www.atlasbooks.com/marktplc/00726.htm

Noise and Vibration Control — Leo L. Beranek: This classic text on noise and vibration control is very widely used throughout the world. The book is divided into three parts: the basics of noise control (including measurement methods, acoustical materials, and sound propagation), application of these principles to reducing noise from sources, and criteria for noise control.

Noise Control in Buildings — Cyril M. Harris: Noise Control in Buildings features contributions by leading authorities on noise control, and contains a very complete set of data on the properties of acoustical materials and on the sound insulation of walls and floor/ceiling constructions. This wealth of technical information provides an invaluable resource for the professional as well as the non-professional.

TAPPING JUST GOT EASIER!

The rugged brand new Norsonic N-277 Tapping Machine is ideal for making structureborne impact noise tests for floor/ceiling combination in the field and in the laboratory. This third-generation unit meets all international and US standards.

- Impact sound transmission testing according to ISO140 part VI, VII and VIII, ASTM E-492 and ASTM E-1007.
- Remote operation from hand switch or PC; Mains or battery operation.
- Low weight 10 kg (22 lb) incl. battery and wireless remote option.
- Built in self-check of hammer fall speed, and tapping sequence for automatic calibration of major components.
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Public pressure—an effective force

Janet Moss

Noise Control Foundation, Poughkeepsie, New York

Preface

A fifth Global Noise Policy Workshop was held during INTER-NOISE 2007 in Istanbul, Turkey, on Wednesday, August 29. The theme of this workshop was “*Public Pressure—an Effective Force*.” The all-day workshop featured sessions with presentations by informed parties from countries around the world. Each session was followed by a question-and-answer discussion period. The Workshop was organized by Janet Moss of the Noise Control Foundation, Poughkeepsie, New York. Three sessions were organized. The presentations and discussions have been assembled by Janet Moss into a “Source Book” which is available from the Foundation (noisecontrolfoundation@gmail.com). This feature article contains summaries of the panelists that spoke in the first session. Future issues of this magazine will contain summaries from the second and third sessions.

Panelists spoke on the effectiveness of public pressure to influence legislators to enact noise control policy. The topics addressed during the three sessions included the following:

- Generating public involvement through education,
- support from NGO interest groups, and
- effective use of the media.

Many participants in earlier workshops have been engineers knowledgeable in the technical aspects of noise control; here we sought to involve the public and those organizations that represent the public. Remember, it was public pressure that led to the movement in many countries to ban smoking in public buildings. Could public

pressure also be effective in reducing noise in our communities?

Session 1 – Direct Public Involvement

Ed Clarke, Association of Noise Consultants, U.K.

How do we motivate the public to action regarding noise in all areas that affect their quality of life? What is being done to send a clear message that excessive noise is not just annoying, but a significant health threat?

Birgitta Berglund, Stockholm University, Sweden

How does noise affect children’s health? Quiet classrooms are important to avoid learning difficulties, as is education on the potential damage from the noise of loud toys and music that may prevent future Noise Induced Hearing Loss (NIHL).

Oktay Eksi, Journalist, Istanbul

Is it possible to get the authorities to take action against intrusive noise? A journalist tells of his experience in dealing with the unbearable noise of a nightclub in his once-quiet residential neighborhood.

Ed Clarke - How do we motivate the public to action regarding noise in all areas that affect their quality of life?

I approach this session with trepidation because this has been billed as being technology-free in consideration of high-level policy. As a practicing acoustical

consultant, this does not come naturally; and I had to go through the text to remove all the decibels. I found this rather liberating. Our profession uses some of the most impenetrable terminology known to man. So with terms such as dBs, phons, LDEN, and DnTmFmaxW removed, we are left with NOISE.

The public is directly or indirectly responsible for most of the noise generation which affects their quality of life. They buy and drive cars, and they frequent noisy nightclubs. They demand air conditioning, ventilation, power, and international air travel. So with any action we consider to reduce noise levels, we are talking about social responsibility. Although social responsibility is difficult to generate on a global basis, I think we are starting to see a greater willingness to accept some responsibility on a personal level; and with this increasing awareness,

the public might become more inclined towards action on noise.

Quiet classrooms are

important to avoid

learning difficulties,...

Our approach, however, cannot be too broad because reaction to noise disturbances is very personal—different individuals find different

sources of noise disturbing. Also, some may not be disturbed by noise until it is pointed out to them, at which point it becomes irritating. So it is inappropriate to encourage greater sensitivity to and militancy against noise. Instead, sources which have the most adverse impact on the quality of life should be targeted. Although noise is often grouped with environmental



pollutants, it has no environmental build-up as do the other pollutants which physically discharge into our ecosystem and remain over time.

The term I use for this approach is *noise control triage*. Just like medics in a hospital, we should focus our attention in the areas that will bring about the best improvement in the quality of life for the population. But in the same way triage requires tough decisions about casualties beyond help, there are noise effects which might be considered beyond redemption.

For example, in the U.K. there are dwellings near a busy highway. The gardens of these dwellings are not enjoyable, and the improvements from various noise control measures would not reduce the noise to a level where residents could comfortably use them. Thus our resources would be better spent on other amenities. Policy makers must make value judgments about priorities and practicality. To improve quality of life, practitioners must help policy makers to understand the triage principle, and target

*...there are dwellings
near a busy highway.
The gardens of these
dwellings are not
enjoyable...*

health effects and real improvements based on an understanding of cause and effect.

What is being done to send a clear message that excessive noise is not just annoying, but a significant health threat?

Because we have TV programs with titles like “Neighbors from Hell” and occasional articles in the tabloid press which are generally ill-informed and sensationalist, we are sending messages. Citizens are much more likely to complain about noise and object to proposed noisy developments than they were before. The message that noise effects are taken seriously and are

a significant health issue seems to be out there in the U.K.

But, this message isn’t sufficiently sophisticated. Noise sources are branded as evil polluters with no sense of context or proportion. There is little clarity or consistency from policy and decision makers on the balance between noise

impacts and commercial realities. We need to more accurately target problematic noise sources rather than scaremongering.

Discos and dance music are not evil, but poorly controlled, uncontained dance music in close proximity to sensitive receptors is a problem. To present policy makers with real issues, we need to target real “noise” rather than all sound.

Noise may be thought of in the same way gardeners describe weeds. In the garden of a vibrant urban soundscape there is a lot of sound—not all of it discordant and noisy. Noise is unwanted sound to an individual listener. In the same way that an orchid would be a weed in a crop of corn, beautiful melodies may be unwanted noise to someone trying to sleep in a flat near a poorly-insulated opera house. We need to weed the garden rather than cutting back everything.

Promoting awareness and social responsibility, which can then be directed towards collective and governmental initiatives, is the way forward. Rather than increasing sensitivity and further promoting a complaint culture, let’s work out what can be done about each particular problem and get people interested in being less noisy.

Oktay Eksi – How I sought relief from the excessive noise of a nightclub in my Istanbul neighborhood

Istanbul, perhaps because it has a

Mediterranean culture, is a very noisy city both day and night. Today I will tell you about an experience that is common to many Istanbul residents. I live in an opulent part of the city, and there a wealthy person owns a house close to where I live. This person invited my wife and me to the opening of his nearby nightclub. My wife on that night congratulated him on the opening, but said that we were concerned there might be some noise from the nightclub. He said that he would not tolerate the noise. That summer there was noise from the nightclub, but it wasn't at a very high level.

The next summer the noise coming from the nightclub was much louder. We couldn't sleep. Loud music came from the club until four in the morning. We called them and asked that they bring the noise level down so we could sleep better. They said they were not aware that there was such a disturbance and said they would bring the noise level down. The next day they sent flowers with an apology. But the loud noise continued, the flowers kept coming, and nothing changed.

The following summer I met the owner and told him that I would have to file a complaint because I could not solve the problem with him. I first went to the local police station and explained the problem to them. The Chief of Police said that it was not their job; and I would have to go to the Municipality. I went to the local Municipality and was told I had to go to the metropolitan Municipality. The metropolitan Municipality told me that they would handle it; but their officers did not have the authority to fill out the necessary documents. They told me I had to go to the Governor's Office.

I felt that I should get petitions from the other people living in the area and take measurements of the noise levels so that we

would have a complete file before going to the Governor's Office. We received many petitions from our neighbors, and I asked a professor from the technical university to take the measurements. A team from her department came to our home at night to measure the noise levels. Of course, their finding was incredible, unbearable noise; and they filed their report.

I went to the Governor with the petitions and measurement results. I explained the problem and asked for his help. He told me he would deal with this issue and asked the Director of the Environment

*But the loud noise
continued, the flowers
kept coming,
and nothing changed.*

to step in. The Director of the Environment said that his office would get to it, but they would have to have their own people do the measurements. They came another night and made measurements. Their measurements revealed excessive noise, and they said they would process a fine. A week later the noise was still going on. We called them again, they made measurements again, but nothing changed.

I looked further into it because nothing was happening; the noise was not stopping. The people at the Environmental Department said that they prepared the reports and sent them to the Governor's Office. They said that the Governor must send the reports to the Prefect's Office in the district in which I live. The Prefect's office then had to send the reports to the local Security Directorate. This file would then be sent to my local police station. The police station would then prepare the fine; and if the club objected to the fine, we would have to wait for the outcome of this process. So that summer also went by, and nothing changed.

The next summer the noise, of course, started again. I asked the Governor's Office as well as the Director of Environment what happened with this issue that was

processed the previous year. They said that was last year, and we would have to start the procedure again this year. I asked them if the officers weren't still the same and exerted pressure on them. They then decided to go to the club with the fine from last year. The person at the club refused to accept the fine. They said that this fine was sent to the club with last year's name, but that the name had changed. The only thing that had, in fact, changed was the name of the club. We couldn't get any results, so another summer went by.

The next year the Governor promised that he would solve the problem. Thirty-six new devices were purchased for measurements and were sent to all the districts so that when they received a complaint, they could take measurements and immediately process a fine. Around that time the Prefect of another district came to see me. During our conversation I asked him if they had received the new devices sent by the Governor. He said they had received them and had started using them immediately. I asked him what they did. He said that wherever there is a noise source, it must be identified and the complaint brought to him. He said that an iron-processing factory and a nightclub in his district were the greatest sources of noise. He said that they went to both places, made the measurements immediately, and processed the fines. When I asked if fines had been imposed, he said that they had made the measurements; but the noise levels weren't excessive. I asked for the report. It turns out that the team had visited the nightclub during the day and the iron factory at night to make the measurements. The Prefect then said he gave up.

Perhaps you are curious as to whether we still have this noise from the nightclub. A year later in June there was a reception at the British Consulate to commemorate the birthday of Queen Elizabeth II. I was entering the venue of the reception with my wife and the nightclub owner was leaving with his wife. When he saw

us he apologized for everything that had happened and said he would solve the problem this year. We thought that at last the state had taken measures, and he had decided to respect them. It turns out that his daughter, who had been living in London, had decided to come back to Istanbul. He said that he would not renew the contract with the nightclub and that his daughter would be moving into that house. This is how we got rid of the noise.

Birgitta Berglund - Noise and our children – their education and protection

The World Health Organization (WHO) Guidelines for Community Noise state that noise is a major environmental health problem. The WHO definition of health is “A state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.” In defining health criteria, the primary goal of the WHO is “To protect the health of sensitive groups of individuals”; the secondary goal is “To protect the health of the general population.” A vulnerable group is children, particularly children with hearing deficits.

Children are exposed to noise from road, rail and air traffic, industries, construction work, discos, music and sports events, playgrounds, fireworks, and other impulse sounds. Common noise indoors is sound from children’s own play, toys, music and playing devices, and ventilation systems. Together these sounds form their “soundscape” and exist not only indoors but also outdoors in such places as balconies, yards, playgrounds, and on the way to and from school.

Every fifth Swedish child in the age group 0-14 years lives in a noisy building, i.e., a dwelling facing and/or having one or more bedroom windows facing a road with

traffic, a railway, or an industry. Sound levels of noise are higher in apartment buildings than in detached houses. In apartment buildings, it is also three times as common that children sleep in rooms with a window facing a noisy street, railway or industry. The education level of children living in overcrowded conditions in noisy buildings is lower. And the noise annoyance is greater among adults and children living in noisy buildings than for those in non-noisy buildings. The same is true for sleep disturbances.

*A vulnerable group is
children, particularly
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hearing deficits.*

Children experience noise annoyance from sources in their environment as do adults. Although 12-year olds may be disturbed by the same noise sources as adults, they are less annoyed than adults by traffic and neighborhood noise. One in every seven 12-year olds is annoyed by the noise in the home or its close surroundings. In comparison, one in every four 12-year olds is annoyed at school, and the most annoying noise source experienced is not traffic or industrial noise, but the noise from other children and loud music. The 12-year olds are also annoyed by scraping sounds of chairs.

One of the most serious effects of community noise is sleep disturbance. Undisturbed sleep is essential for children and adults to function well, both physiologically and mentally. Many children find it difficult to fall asleep or are awakened from their sleep because of noise. Noise-induced sleep disturbance increases as the sound level outside the bedroom window increases, especially if the noise events are greater than $L_{Amax} = 45$ dB indoors. Road traffic noise is more sleep disturbing than a continuous ventilation noise at the same sound level.

*Children’s toys may
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Young children exposed to high sound levels risk hearing impairment. Babies in incubators may be exposed to sound levels of 80-90 dB L_{Aeq} combined with 120 dB L_{Amax} . Fortunately, this noise has been mitigated by giving the infants hearing protectors. Children’s toys may generate very high impulse sounds or will emit a continuous noise (e.g., toy telephones and MP players). Several studies have shown that sound levels are high in playrooms, daycare centers, and schools. For example, sound levels in British schools have been measured to be at $L_{Aeq} = 31-70$ dB when children work independently and at $L_{Aeq} = 52-101$ dB when they work together.

Hearing deficits among adults may be caused by noise exposures as a child or young adult.

Children and young adults are exposed to hearing-impairing noise to an extent that does not seem to have happened in the past. At the age of 4, about 2 percent of the Swedish children are reported to have impaired hearing. At the age of 12, the figures are 3-4 percent. In comparison, 0.2-0.3 percent of newly-born children have hearing impairment. No distinct difference in reported hearing deficits

is associated with traffic noise at home. There is, for example, no difference between 4-year and 12-year olds who slept in a bedroom with windows facing a noisy street, railway, or industry as compared with the children that did not. Unfortunately, we do not know how many of the children have hearing impairments caused by exposure to high sound levels. Nor do we know for

certain whether or not the impairments are more common than before among children and young adults.

Tinnitus (ringing in the ears) is a common condition among adults which is often

concomitant with a hearing deficit. The prevalence of tinnitus or other sound sensitivity is particularly high among musicians. One in every four children in Sweden listens to loud music through earphones, while one in every hundred children does this daily. Among the 12-year olds, one in every five reports that after listening to loud music or other loud noises, they experience ringing, squeaking, howling, or buzzing in their ears. These symptoms are more frequent among boys than girls. In addition, one in ten of the children reports that their hearing also sometimes becomes worse after noise exposure. Some children in this age group report that they often or always have ringing in their ears (tinnitus).

Studies indicate that, in highly-exposed adults, there is an increased risk of high blood pressure. Some studies also indicate that noise may also have an impact on blood pressure in school children. After long-term exposure to aircraft noise near airports, school children have been shown to perform worse in proofreading, completing jigsaw puzzles, and reading comprehension and to have poorer memory and motivation. The effects on children's ability to read and on learning have been confirmed in a number of studies. The longer and stronger the exposure, the greater the harmful effects seem to be. Recent research has confirmed that noise in school environments negatively affect children's language acquisition. In schools in the United Kingdom, The Netherlands, and Spain, a relationship between aircraft noise and decreased reading comprehension has been shown. It was estimated that an increase in the sound level of 5 dBA was related to a decreased reading comprehension corresponding to 2 months learning in the United Kingdom and to 1 month learning in The Netherlands. Hyperactive children are suspected to be more at risk for chronic aircraft noise exposures.

In conclusion, it is important to tackle children's exposures to noise sources in schools, leisure environments, and at home. Community action should be taken against excessively loud music. Action is also urgently needed to mitigate the loud sounds often produced very close to the ears by toys, telephones and music players. It is most important that the children's ever-increasing *sound spiral* be cut off: The trend is to abate noise indoors, but not outdoors, not even in the surroundings of children's homes and schools. In spite of ambitious guidelines, children continue to be exposed to loud noise outdoors as well as in schools, kindergartens, and day care centers. They are exposed to sound levels surpassing current EU limit values that require ear protection at work ($L_{Aeq,8h} = 80$ dB). Children have acquired a new sound culture involving earphones, mobile phones, music players, noisy toys, as well as advanced sound production systems including TV, computers, and high-power loudspeakers. With the ever-increasing traffic noise constituting the background, the foreground sounds of the close-to-the-ear devices will also increase, voices will be raised, and playing children become noise sources. Our children's noise exposure spiral must be cut off. This is the responsibility of all adults.

Discussion **Quality of life and public awareness**

Question for Ed Clarke: Consultants often advise companies and authorities to stay within limits. However, they could advise also in line with the ALARA principle (As Low As Reasonably Achievable), lower noise levels even when within limits. This does not seem standard practice, but could be a new approach by consultants. Will you elaborate?

Answer: I agree. The example that comes to mind is sound insulation between residential dwellings. In the U.K. we have recently introduced mandatory testing of newly-built dwellings. As consultants we're often asked to measure the sound insulation to say whether it passes or fails and to assess designs and state whether or not they're likely to pass. Often we find ourselves in a position where we look at a design which may just pass. Builders are trying to maximize their profits so they're not putting extra sound insulation in where they don't feel the need. It's clear from our interactions with people living in these

houses afterwards that the threshold at which the regulatory standard has been set is too low. So in advising our clients, it's important to get that context across and to explain that they've not passed well; they've only passed the bare legal minimum. They're going to sell these apartments for ¼ million pounds. The people living there aren't going to want to hear their neighbors. For that matter, the people who live in apartments that don't cost that much don't want to hear the neighbors. So there are bare legal minima, and they should be treated as such. That's also the case also with noise exposure on sites for planning, for example, where protection from traffic noise in terms of complying with the planning consent is required. Yes, we can just make it if we put up a 2-meter-high fence. Instead of just making it, why not put up a 5-meter fence?

Comment: A few years ago the National Research Council in the U.S. published a report not only on noise but on other aircraft emissions. In that report they listed about 80 U.S. citizens' organizations around the country that are concerned with aircraft noise. The one I'm most familiar with is the O'Hare Noise Compatibility

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Commission, and around O'Hare the government has spent almost \$200 million insulating homes around the airport. You multiply that by all of the airports in the U.S. and you are up somewhere around \$2 billion for insulating homes. That's about \$25 thousand per U.S. home, and about \$250 thousand per school.

Comment: And that is only to make the space better indoors. The garden of the home that has received the \$25 thousand is not any better after the interior space is improved. So the garden is still essentially unusable in the vicinity of the airport.

Comment: There is a strong need for basic information for the public. I think that many people have no idea of what is important in terms of noise in various circumstances. We talked about what noise is normal or too loud inside a school. It is the same problem with community and occupational noise. If there were more systems which give rough values of noise with a red, yellow, or green ear, could we induce the public to respond? At the moment there are people who say there is too much noise, but what does that mean? There is little understanding of what should be required. This is a major opportunity for manufactures to market improved warning systems. Some exist and are very cheap, but they are not very good. I don't see such systems in wide use, but why not have a noise alarm system in a work environment similar to a chemical alarm system?

Comment: We have to do much more to raise public awareness of the health effects of noise. People claim that they can adapt to the noise. There is no adaptation to noise; it's simply not true. This is particularly relevant for the developing countries. The Indians and Pakistanis are exposed to much higher noise levels than we encounter in developed countries. They are simply not aware that their hearing is being impaired. It is important to the public that the media and academia come in and tell them that this is a serious problem.

Of course this problem is not climate change, and it is not something which may influence the fate of mankind. But it is something we have to consider and make the people, the children particularly, aware of the dangers of excessive noise levels.

Comment: I've just come from the session of the WGAN Working Group on the Environmental Noise Directive (END). Under the END, European countries that are making noise maps for cities have an obligation to inform people what is going on, but at the moment there is a very low awareness that mapping is being done. I don't know how many people here are familiar with air policy and what is being done with ecology management and information on air quality and air pollution. The Working Group is looking at a similar system for noise so that when noise mapping is done for community noise—the transport industry—there will be a system to flag different noise levels and hot spots. What they are doing is very good. The problem at the moment is that there is a very low level of awareness by the public. We work with U.K. environmental health officers who influence noise legislation. Not many people know about noise mapping and the obligations of the authorities under the Environmental Noise Directive. They are reluctant to tell people about noise mapping because, if people find they are living in hot spots, they will think it will affect their property values. What I'm concerned about is that our governments at the moment are not taking the noise issue seriously. That's work that the NGOs do, they are trying to raise the profile of noise with the government.

Noise and Our Children

Question for Birgitta Berglund: Do you think that most of the conclusions on children are also valid for adults?

Answer: Yes. For example, at the Stureplan in Stockholm, which is a popular square, they are seriously considering putting up telephone booths again. This is not for land-line telephones, but for people to make mobile phone calls, because of the strong background noise. So most certainly, it is true that the same conclusions can be drawn for adults as for children—both have difficulties hearing in noisy environments. But, the effects are more serious for the children because of their language development. It is a particularly serious problem for children when they are surrounded by strong background noise.

Question for the Panel: Is anyone aware of a school system that includes noise effects in their health education programs? I wondered about noise being included in the same way that we have the threats from smoking or drugs in the health education classes in schools. These things are taught to children at a very young age. I know of no schools where this is part of the health education for young children. I was hoping that somebody knew of a school system that included this in the health education and how they did it.

... there are some teachers in schools who are interested and are doing quite a bit of noise education.

Comment: We made a new initiative, Noise Action Week, which has been very successful in the last ten years. Although it's not specifically aimed at schools, a lot of schools take part in it; and it's become a regular part of their annual program. The way it works is that local authorities who manage noise in the area go into the schools. I think it actually is included in the English curriculum. It's not specific, but there is some provision for education in noise and sound. Although it's not a major element, there are some teachers in schools who are interested and are doing quite a bit of noise education. But it's thinly spread at the moment. The website is: noiseactionweek.org.uk.

Comment: In Norway we have an electronic instrument. It's an ear which is green on the outside, then yellow, and then red. It's got a microphone so you can detect the sound level in the room. This is very often used in kindergartens. The children are told that when there is a red ear, that means it is dangerous to their ears and they are told to keep their voices down. And they quiet down, so it's possible to teach them that way. It is a commercially-available instrument.

Comment: This big ear is also in the abatement program at kindergartens in Sweden. It is interesting that at first the colored ear worked. Then, research on its efficiency was made in Sweden and from the evaluations, it turned out that some of the younger kids thought it was fun to produce the sounds that turned the ear red. They also have introduced these ears in gyms in Sweden, but there the "healthy" sound levels were frequently exceeded by the adults!

Comment: The people from Scandinavia are very sensitive to noise, I think more sensitive than in many of the southern countries. I will see if we have something on our books concerning noise in schools. It would be good if all of you were to check in your own countries what they are teaching the children about noise. Because it takes many years to lower the noise levels what can we do in the meantime to better educate our children? It has been done for air pollution but will take a long time.

Question for Birgitta Berglund: Where is information on the effects of noise on learning published? Could you say where peer-review journals are published?

Answer: There are a number of them, but there is a recent review of the literature as part of the large RANCH study, which was published in the *Lancet* in 2005 (Stansfeld, Berglund *et al.*). There are also a number of other studies, which have appeared

in the acoustical or hearing journals of various kinds.

Dealing with Intrusive Noise

Question for Ed Clarke: In New York City there is a designated hot line for noise complaints. Is there such a thing in any U.K. cities?

Comment: Yes there is. Most local authorities have environmental health departments or environmental protection departments. When I try to speak to a particular official about a case, many of the phone calls intended for that individual go straight through to the noise hot line. Unfortunately, there's often a delay in response to these cases caused by a lengthy procedure. Forms are sent to the complainant requiring details about what the neighbors are doing and why it is objectionable. It is similar with airports with their noise hotlines about noisy aircraft. In some ways these noise hotlines are a box-ticking exercise because, as we heard with the disco noise in Istanbul, you can process lots of forms and documents, but it is actually getting something done and some interaction between those involved that's important. And in my experience you need to speak to somebody rather than merely logging in to a hotline system.

Question for Oktay Eksi: Did you launch a media campaign against noise? What was the outcome?

Comment: I have mentioned the topic many times in my newspaper articles, but I cannot say that it turned into a media campaign. I have always supported this issue, and I do keep writing about it.

Question for Oktay Eksi: Was the noise you spoke about only due to music or also to voices and vehicular traffic?

Answer: We live in a relatively serene, quiet neighborhood, so basically the problem was music. What you hear other

than the music comes from the mosque—there is nothing else.

Question for Oktay Eksi: You described lots of forms and processes and back and forth regarding the music noise. Did anyone look at the building to see where the noise was coming from—a door or a weak point?

Answer: They took measurements in our home, around our home, on the balcony, in the living room, in the bedroom. They went all the way to the club. They were not permitted inside and could only take measurements from the outside.

Question for Oktay Eksi: Are there no regulations in Istanbul regarding the licensing of discos in residential areas? What is the role of the courts with respect to complaints?

Answer: I couldn't say anything about the licensing of discos because it is not in my area of expertise. Nor can I comment on the role of the courts.

Comment: The Turkish government is preparing noise legislation based on European directives. Does anyone know whether the noise from discos and nightclubs is included in the regulation?

Comment: There is a person here at the congress who knows. He is assisting the European government in preparing the noise law and is at the ministry in Ankara.

Public Involvement

Question for the Panel: What different approaches, depending on the definition of the public—all people, adults only, the media, commerce, industry, legislators—could be taken for action against noise?

Comment: I don't think the public will put pressure on the government. Members of the public who are affected by different aspects of noise will form pressure groups and they, like everybody here, will put

pressure on the government. Then it is up to the government to act positively to that pressure. The problem in so many countries is that the government reacts negatively to the pressure from public advocacy groups.

Comment: It's a chicken-or-egg situation because the public has to first put pressure on the government.

Comment: There must be interest action groups which have noise on their agenda and drive the issues. This could be a small group of people with a common interest. A good example is when we produced the WHO

document on community noise. What happened immediately was that it led to improved incubators for premature babies. They are no longer exposed to damaging noise. This immediate change would not have happened if the WHO document had not been published. When it comes to the children, it is interesting that the parents' organizations have stepped into the debate and school administrators' organizations have discussed and proposed actions against noise at school. They are now promoting better sound environments in Swedish schools. So I believe that action groups are a must, and not necessarily governments. Action groups or NGOs were behind the launching of the EU Directive on Environmental Noise.

Comment: I agree. Governments don't act only when there is public pressure. Initially legislation may not be as effective as it should be, but public action—complaints—will improve the legislation. Certainly the media play a role, but the main passion should come from organizations, from NGOs that are important within this process. If they are not active, the legislation remains as it is. And the vested interests of industry may be influential behind the scenes against the legislation.

Comment: But the government tends to see NGOs as thorns in their side. They don't want to be pushed. They are doggedly persistent and push us away if they can. And NGOs don't have the money or the wherewithal with which to fight; that is the problem. The bottom line is money.

Comment: In my experience there has, in some governmental organizations, been one person, who is interested and who really can make a difference. I think that we have to support such special persons within organizations, as well as those organized in

action groups. Had it not been for one person, Dieter Schwela, then the WHO Guidelines for community noise would not have happened. The EU Directive on Environmental Noise would not have happened if someone hadn't found the WHO Guidelines and acted on it.

Comment: I agree that this directive was dependent on a small group of people who were motivated—and they succeeded.

Comment: What has been said about individuals and pressure groups is correct. The big challenge in the noise world is making our cause popular with the public and getting its support. A parallel is the issue of global climate change. Ten to fifteen years ago there were a small number of pressure groups, NGOs, and some prominent individuals talking about climate change. Over the past 10-15 years they have managed to make climate change a subject that now has a lot of public support. The challenge that we've got as individuals and pressure groups and

academics is to find ways in which we can make noise and noise reduction as popular with the public as is climate change today. It's not going to be easy because people feel that they and their children will be personally affected by climate change. They do not feel they are going to be affected by increasing global noise levels.

Comment: What I'm hearing is that there is a lot of information out there and there is quite a strong level of public awareness as well, but it's disjointed. What we need is orchestration. There was an example in the newspaper recently when a clinical audiologist measured noise levels in a number of U.K. cities and rated them. Newcastle was the noisiest; Bristol was quite noisy. He'd gone around the country measuring noise levels by standing next to a randomly selected road for five minutes. It was terribly unscientific. There was no mention of the 13-million-pound Noise Mapping England project, examples of which would have been useful. All

this information is out there but is never really publicized when it becomes available. So it's a question of orchestration and connection which is key to how you achieve increased levels of awareness.

Behavioral Change

Comment: My feeling is that unless governments are going to take the lead and introduce legislation, it's going to be very difficult to persuade the public to be less noisy. Of course there are things the public must

do, and there is a role for the media. But unless the legislation is there, unless the government takes the lead, I think it will be difficult to influence public behavior. Governments are sometimes reluctant to take the lead because often their policies

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continued on page 29

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Books

Riding the Waves: A Life in Sound, Science, and Industry

Leo L. Beranek

The MIT Press, 2008

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How a farm boy from Iowa started in business repairing radios, managed to go to graduate school at Harvard, led the work on Harvard's first-ever government contract, became an MIT professor, and founded a successful consulting firm is an amazing story. And that's the beginning. There was concert hall design, ARPANET, WCVB, and public service for, among others, the Boston Symphony Orchestra, and the American Academy of Arts and Sciences.

"Riding the Waves: A Life in Sound, Science, and Industry" is the autobiography of Leo L. Beranek, Charter President of INCE/USA. The prologue begins with a lot of self-doubts on the evening of the opening of New York's Philharmonic Hall in 1962. Bolt Beranek and Newman (BBN) had done the acoustics, and there had been many of misunderstandings and miscommunications with the architect—not good omens for a successful acoustical outcome. "For me," Leo writes, "the evening can't end soon enough. I head back to my hotel with a splitting headache triggered by the blare of the orchestra and the choruses and that spot in the Mahler where a percussionist strikes a rail with a sledge hammer." Not a happy beginning for a book that has quite a few happy endings.

Many of the stories in Leo's book will be of special interest to those interested in noise control. One of the most interesting is what happened in the late 1950s before jet airplanes were allowed to land at Idlewild (now JFK) airport on Long Island. It was not the acoustics community but the public which first observed that the new jet airplanes were considerably noisier than propeller-driven airplanes of that era. This caused the New York Port Authority to enage BBN, and measurements showed that a propeller-driven airplane and jet airplane measured to have the same A-weighted sound level were, in fact, quite different according to subjective judgments of the noise. The jet airplanes sounded considerably louder, and there were serious questions about whether these airplanes should be allowed to land at Idlewild. Needless to say, these questions were of immediate interest to the airlines and airplane manufacturers. The story of how BBN was involved in the development of a new metric, perceived noise level, and how all affected parties came to accept the results is a fascinating one. How, overnight, 1000 copies of each of two reports could be mimeographed, collated by Authority police officers, bound and delivered to all interested parties by a fleet of about 100

taxis is a fitting end to the story of the development of a new metric for noise evaluations.

Another story is of the development of a muffler at the Lewis Flight Propulsion Laboratory in Cleveland, Ohio. It didn't take long to determine that the operation of a new jet engine in a supersonic wind tunnel would cause a community noise and vibration problem. "The noise produced was so intense that switchboards in police and fire stations, radio stations, and public offices lit up nonstop with complaints from neighbors. The noise sounded like a series of thunderous explosions, even at distances as far as five or ten miles away. And the noise was the least of it—what really got to people was the vibration, which shook them and rattled windows." Design of a conical tube muffler 200 feet long with a diameter of 26 feet at the large end was no small task.

There are many other good tales—too numerous to review here. But Leo's story, in many respects, is a modern history of our profession and I am sure that readers of this magazine will enjoy reading the book.

My first involvement with Leo was in the summer of 1951. After three years at Bowdoin College, I entered MIT as a junior, and one of my summer courses was electric circuit theory, taught that term by Leo. I knew nothing of his wartime work at Harvard, and was only dimly aware of his consulting work in acoustics. In 1953, I became interested in noise control, particularly through his course on acoustics; the class notes became his 1954 book, *Acoustics*. There were also the special summer courses on noise reduction held at MIT and taught in cooperation with other specialists at BBN.

One disappointment is that there is no story about Leo's involvement with the founding of INCE/USA. This is understandable because the story is, perhaps, only interesting to our small group. On the 20th anniversary of INCE/USA in 1991, Bill Lang prepared a booklet on the early history of the organization and the events that led to its founding. Leo played a key role in the establishment of INCE/USA and became its first president. Perhaps Bill can be persuaded to summarize that involvement in a short article published in a future issue.

—George Maling
Managing Editor

Congratulations to Laymon Miller!

National Council of Acoustical Consultants Announces the Charles Paul Boner Award Recipient

The National Council of Acoustical Consultants (NCAC) is pleased to announce, Laymon N. Miller, as its 2007 recipient of the C. Paul Boner award. This award is presented to a member of the acoustical consulting community who embodies the qualities of the late C. Paul Boner— teacher, scientist, administrator, technician – and who has made outstanding contributions to the science of acoustics. This award has been given only six times in its 24-year history. Mr. Miller said, “My being here today under these circumstances is an *impossible dream!*” It is not even “a dream come true” because in all my life I would never have even dreamed of such a thing.”

In 1941, Mr. Miller joined a group of researchers at the Harvard Underwater Sound Lab where his work focused on development of an acoustic homing torpedo for the Navy. After WWII the torpedo research was moved to Penn State, where Laymon advanced from Assistant Professor to Associate Professor and finally to full Professor of Engineering Research. After 10 years at Penn State, Mr. Miller joined the acoustical consulting firm of Bolt Beranek & Newman Inc. where he remained until retirement in 1982. In addition to his membership in NCAC, Laymon is also an Emeritus member of the Acoustical Society of America and a member of the Institute of Noise Control Engineering. NCAC President, David Marsh said “I can think of no other more deserving candidate. Laymon is a legend in the acoustical consulting community and it was a thrill to see him receive this award.” Mr. Miller and his wife Lucy now reside near Fort Myers, Florida.

A New American National Standard is Available

A New American National Standard, Quantities and Procedures for Description and Measurement of Environmental Sound – Part 5: Sound Level Descriptors for Determination of Compatible Land Use, is available from the Acoustical Society of America.

This Standard provides guidance on the

compatibility of various human uses of land with the acoustical environment. This Standard uses the annual average of the total day-night adjusted sound exposure or the annual average of the adjusted day-night average sound level to characterize the acoustical environment. The annual average of the total day-night adjusted sound exposure and annual average of the adjusted day-night average sound level are explained in Part 4 of ANSI S12.9. An informative annex provides guidance for designation of land uses compatible with existing or predicted annual averages of the total day-night adjusted sound exposure or annual average of the adjusted day-night average sound level. Ranges of the annual average of the total day-night adjusted sound exposure or annual average of the adjusted day-night average sound level are outlined within which a specific region of compatibility may be drawn. These ranges take into consideration the transmission loss in sound level from outside to inside buildings as commonly constructed in that locality and living habits there. This standard is a revision of ANSI S12.9-1998/Part 5, and is priced at 90 USD.

To purchase an electronic copy of this ANSI Standard or other National or International Standards on Acoustics, Mechanical Vibration and Shock, Bioacoustics, or Noise please visit the Acoustical Society of America's Home Page at: <http://asa.aip.org>

Hard copies of Standards may be purchased by contacting: Acoustical Society of America, Standards Secretariat, 35 Pinelawn Road, Suite 114E, Melville, NY 11747-3 177. Telephone: +1 631 390 0215 / Fax +1 631 390 0217

Animal Bioacoustics Standards Subcommittee Launched

The Acoustical Society of America is pleased to announce the formation of a new standards subcommittee focused on the subject of Animal Bioacoustics. The formation of this subcommittee was approved by Accredited Standards Committee S3, Bioacoustics, to provide an opportunity for American National Standards to be developed by experts in this specialized subject. The scope of the

subcommittee includes: “Standards, specifications, methods of measurement and test, instrumentation and terminology in the field of psychological and physiological acoustics, including aspects of general acoustics, which pertain to biological safety, tolerance and comfort of non-human animals, including both risk to individual animals and to the long-term viability of populations. Animals to be covered may potentially include commercially-grown food animals; animals harvested for food in the wild; pets; laboratory animals; exotic species in zoos, oceanaria or aquariums; or free-ranging wild animals.”

Membership in the subcommittee is open to companies, government agencies, or professional, scientific or trade associations, with a direct and material interest in the work of the subcommittee. Members of the subcommittee may also elect to become members of Accredited Standards Committee S3 if they wish.

The subcommittee operates according to operating procedures that are accredited by the American National Standards Institute (ANSI) and meet the ANSI requirements for openness, balance, and due process. Organizations wishing to learn more about this subcommittee or the other standards committees and U.S. Technical Advisory Groups administered by the Acoustical Society of America should contact the Standards Secretariat at the telephone number given above or by e-mail at asastds@aip.org. 

Public pressure—an effective force *continued from page 25*

contribute to the noise, particularly when it comes to traffic or aircraft policies. It is easy to say to people that they must be quiet, turn down their music, while governments are authorizing the construction of a new road or a new airport. Unless the government sets an example by setting noise limits, it will be hard to persuade the public to be serious about turning down the noise.

Comment: There is a good article in the journal, *Noise and Health*, written by Professor Charles Vleck as a commentary on the “Quieter Europe” document of the CALM project, which resulted from the EU work with the Environmental Noise Directive. The article is about the role of behavioral change. The core item here is that it is necessary to change our behavior. We can’t continue to buy more cars, then to build wider roads, more lanes, so that more cars can be accommodated. We can’t do that, and at the same time, believe that we do something about the road traffic noise problem by acting only on the noise source—the car itself. From a psychological viewpoint behavioral change is a worrying thing if we imagine that the government could start requiring behavioral change in order for the noise pollution to decrease. We have to find ways by which we can improve systems, for example the traffic or transport system, which is the most important infrastructure for our environmental noise problem.

Comment: It’s not just what people do to themselves; it’s about the effect of their noise on others. And that’s about behavior in terms of being considerate of people around them. Changes in behavior have to happen voluntarily, but they must come about through awareness and publicity.

Summary of main points

1. The public should be made more aware of how excessive noise affects their health and quality of life through the dissemination of basic information of what is important in terms of noise exposure—in schools, homes, and on the job.
2. Excessive noise can adversely affect a child’s learning ability, and loud toys and music may damage hearing. Education about the harmful effects of noise should be started at a young age.
3. Means must be found to more effectively translate complaints into remedial action. Recourse against intrusive noise in our lives must be simplified, and noise regulations more effectively enforced.
4. Cooperation among the NGOs, the endorsement of prominent individuals, the support of technical experts, and media interest are necessary to bring the noise issue to the public’s attention. Once informed, the public is more likely to put pressure on legislators for effective noise regulations.
5. Although technology is available to enable the design of quieter products, much of the noise in our communities is produced by the residents. A sense of consideration for our neighbors will go far to quiet loud music, noisy parties, and other sources of noise under individual control. A behavior change is needed but will be a challenge to bring about. 

Noise and
hypertension are
clearly related

Europe

New Results from the HYENA Project

Hypertension and Exposure to Noise Near Airports (HYENA) is a European Union project that has just completed a study "Acute effects of night-time noise exposure on blood pressure in populations living near airports." The paper was published on 2008 February 12 in the *European Heart Journal*.

The following URLs should be of interest to individuals interested in the non-auditory effects of noise.

HYENA home page: <http://www.hyena.eu.com/>

Media coverage generated by the paper cited above: <http://www.hyena.eu.com/media.htm>

URL for the paper itself. <http://eurheartj.oxfordjournals.org/cgi/reprint/ehn013v1>

Costs of European Transportation Noise

A long (336-page) report, "Handbook on Estimation of External Cost in the Transportation Sector," has been prepared within the study "Internalisation Measures and Policies for all External Cost of Transportation" (IMPACT). The handbook was done by CE Delft, and was supported by the European Commission, Directorate-General Energy and Transport. The report is dated 2007 December 19, and can be found on the Internet at the URL http://ec.europa.eu/transport/costs/handbook/doc/2008_01_15_handbook_external_cost_en.pdf

There is a long chapter on the costs of noise as well as a long appendix with more details on noise effects for road, rail, and aviation noise. As one example, the costs per person per year for noise in Germany (from HEATCO, 2006) are estimated (in 2000 EUROS) to be 44, 0, and 68 for L_{den} greater than or equal to 55 dB for road, rail and aviation, respectively. The corresponding values for L_{den} greater than or equal to 65 dB are 132, 88, and 204. Since an increase of 10 dB corresponds

approximately to a doubling of loudness, it can be seen that a doubling of loudness from 55 dB corresponds to an increase, in the cost of noise by a factor of three.

Extensive tables and lists of references are given in the report. More information is given in the 2006 HEATCO report. See <http://heatco.ier.uni-stuttgart.de/>, Deliverable 5 for links to the report.

Another earlier report supported by the same Directorate-General is also of interest. It is "Study on the different aspects of Noise Limits at Airports" dated 2004 October 05, and may be found at http://ec.europa.eu/transport/air_portal/environment/studies/doc/aspects_noise_limits.pdf.

Updated CALM II Network Report is Available

In 2007 September, the CALM II Network (<http://www.calm-network.com>) issued an updated version of its report "Research for a Quieter Europe in 2020." In the report, the environmental noise situation is reviewed, targets for future research are identified, and information is given on road, railway, and air traffic research as well as on equipment used outdoors.

One identified research need is related to perception-based research: advanced computation and measurement methods for more accurate assessment of noise exposure. A second is related to quiet areas. "Appropriate indicators and limit values are needed to define and delimit quiet areas and to determine the public response to noise exposure in quiet areas. In the report, there is also a recognition that improved test methods are required for road vehicle noise emissions. Current methods are "...not sufficiently representative for the typical conditions in real situations.

To download a copy of the report, go to:
http://www.calm-network.com/index_stratpap.htm.

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Australia



ICA 2010, Sydney

Following the formal launch of the International Congress on Acoustics for 2010 (ICA2010) during the closing ceremony of ICA2007 in Madrid, the organizing committee has proceeded with the task of planning for this event. The small web presence has now been replaced by the real website although many of the pages at the site www.ica2010sydney.org will not be filled with information until closer to the event. Promotion is essential to achieve a good attendance at the ICA. This year is a particularly busy year for acoustics conferences and the organizing committee looks forward to each of these events as a promotional opportunity to encourage participation at ICA2010. For more information on the ICA2010 go to www.ica2010sydney.org

Telephone Hearing Screening

Telscreen is Australian Hearing's new national telephone service that allows you to take a free hearing screening over the phone, any time, anywhere in Australia. Based on extensive research, Telscreen has been developed by the National Acoustic Laboratories (NAL) in conjunction with Australian Hearing and is one of the most sophisticated telephone hearing services in the world. Telscreen is a self check of hearing disability via the telephone and is not a replacement for a face-to-face hearing screening carried out by a qualified clinician. It should not be taken as medical advice. The recorded speech, a series of three numbers,

is obscured by a pulsing noise. The listener must punch into the telephone the three numbers they thought they heard. A different set of numbers is then presented with a different signal to noise ratio.

Australian Hearing is introducing Telscreen to improve identification of hearing loss within the community and raise awareness of hearing loss as a significant health issue. National Acoustic Laboratories (NAL) will conduct research into the effectiveness of Telscreen and will continue to monitor its quality and use data for further research into hearing loss. Australian Hearing is keen to provide accessible services that help screen for hearing disability. Telscreen makes hearing screenings easier and more accessible, especially to those in rural and remote parts of the country.

Anyone visiting Australia can try this out from the free call 1800 826 500 (not a mobile!) Extracted from www.hearing.com.au

India

More quiet zones in Calcutta

The state environment department has declared three more areas in the city as silence zones. These new zones are near Hospitals and Colleges the use of loudspeakers, lighting of fireworks and blowing of horns will be banned within 100 metres of these zones. Police will be responsible for the enforcement of the 'silence' zones and will be will start taking action against violators a fortnight after the publication of the advertisements.

[from www.telegraphindia.com] 

*Hearing tests
by telephone.*

*Patricia
Davies is now
president of
INCE/USA.*

INCE/USA Elects New Officers and Directors

The Annual Meeting of the INCE/USA Board of Directors and the Annual Meeting of the Institute were held on 2008 March 8-9 in Dallas, Texas.

Deane B. Jaeger, currently pursuing an MBA at California Lutheran University, Charles T. Moritz, Blatchford Inc., and Thomas E. Reinhard, Southwest Research Institute were elected directors by the voting members for a three-year term. In addition, two directors, Nicholas Miller of Harris Miller Miller and Hanson, and James Thompson, B&K, were elected directors for one-year terms at the Annual Meeting of the Institute.

Patricia Davies, Director of the Ray W. Herrick Laboratories, Purdue University was executive vice president, and now serves as president for a two-year term. Paul Donovan is the immediate past president. Michael Lucas of Ingersoll-Rand was elected vice president for publications. Paul Burgé, URS Corporation, was elected at the Reno meeting of the Board of Directors as chair of the Honors and Awards Committee.

Eric Wood of Acentech, Inc. continues as vice president— membership, Mandy Kachur of Acoustics by Design, Inc. continues as vice president— public relations, Steven Hambric, The Pennsylvania State University, continues as vice president— technical activities, and Richard Kolano, Kolano and Saha Engineers, continues as vice president— board certification. Todd Rook, Goodrich Aerospace, continues as secretary, and Steven E. Marshall continues as treasurer.

Courtney Burroughs continues *NCEJ* editor-in-chief, Joseph M. Cuschieri continues as executive director, and George C. Maling continues as managing editor of *NNI*. Richard J. Peppin of Scantek, Inc., continues as *NNI* advertising manager and INCE/USA exposition manager. Ralph Muehleisen of the Illinois Institute of Technology continues as chair for student activities. 

European News *continued from page 30*

UNITED KINGDOM

Anase Study Report is Available

A report, Attitudes to Noise from Aviation Sources in England (Anase) was released in 2007 November. The purpose of the study was to produce an up-to-date analysis of the impacts of aircraft noise, building on previous research from 1985. The objectives of the report were to

- re-assess attitudes to aircraft noise in England,
- reassess their correlation with the L_{eq} noise index; and
- examine (hypothetical) willingness to pay in respect of nuisance from such noise, in relation to other elements, on the basis stated preference survey evidence.

The report and additional information is available in the form of:

- an executive summary,
- the final report,
- technical indices,
- non SP peer review, and
- other comments.

For more information, go to: <http://www.dft.gov.uk/pgr/aviation/environmentalissues/Anase/>

An article, “ANASE: Unreliable—owing to design-induced biases,” critical of the study was published by Peter Brooker, Cranfield University, in the *Acoustics Bulletin*, 2008 January/February, pages 26-31. 

International Representatives

Below is a list of international contacts for the advertisers in this issue. The telephone number is followed by the fax number where available. In cases where there are several telephone numbers per location, or several locations within a country, a bullet (•) separates the telephone number(s) from the respective FAX number. Advertisers are asked to send updated information by e-mail to: IBO@inceusa.org.

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INTER-NOISE 07 Report

The 36th annual INTER-NOISE 07 Congress was held at the International Congress and Exhibition Center, Istanbul, Turkey from Tuesday, 2007 August 28 through Friday, 2007 August 31 and included technical sessions, an exposition of acoustical and noise-control products, and social functions. The annual Congress drew more than 1,000 participants from 50 countries and featured 535 papers, 64 posters, four keynote addresses, two workshops, and more than 40 exhibits. The Congress was organized by the Turkish Acoustical Society, and sponsored by the International Institute of Noise Control Engineering (I-INCE). The Congress President was H. Temel Belek.



Left: Hideki Tachibana, International INCE President, opens the INTER-NOISE 07 Congress. Right: William W. Lang presents the opening plenary lecture.



H. Temel Belek, Congress President welcomes delegates to Istanbul.

“Turkey is a major market for sound and vibration issues,” said H. Temel Belek, in his opening remarks to INTER-NOISE 2007 Congress-goers. “With our rapidly developing economy and the demand for a better quality of life, this issue has gained great popularity here. In addition, we are becoming a major tourism center and the sustainability of that effort requires a quieter environment.”

“Industrial noise has become a major issue (in Turkey) with the rapid growth of industry,” Belek continued. The only city in the world to occupy two continents—Europe and Asia—Istanbul has a population of more than 11 million people. The physical and economic infrastructure to support the city and its inhabitants has greatly exacerbated noise problems.

According to Belek, the efforts of his country to join the European Union in the near future will be linked, in part, to the ability to “impose tighter control on noise and vibration standards and regulations.”

The importance of noise control and the role played in addressing that issue by professional organizations like I-INCE and its members societies was also underscored by Hideki Tachibana, president of International INCE, in the comments he made to open the Congress.

“INTER-NOISE is the most important event sponsored by I-INCE, and the theme—Global Approaches to Noise Control”—is a most important topic considering the present state of our environment. Today, noise seriously impacts the quality of life



Above: Venue for the INTER-NOISE 07 Congress. Right: A musical interlude at the INTER-NOISE 07 opening ceremony.



everywhere, and this will only get worse as the world gets bigger and noisier.”

The opening ceremony included a lecture titled “Global Approaches to Noise Control” by Dr. William W. Lang, president of the Noise Control Foundation and an active participant in attempts to develop a global noise policy. Dr. Lang

urged Congress-goers to consider all aspects of noise in the community, at work, and in leisure settings. He discussed the feasibility of product labeling for noise and outlined the critical role of engineers in developing noise control strategies.

The opening ceremony also included a musical performance by a famed Turkish

violinist as well as selections of computer-generated music. The event concluded with a reception and a first view of the exhibits of state-of-the-art noise and vibration products.

Day two of the Congress opened with a distinguished lecture by Prof. Dr. Jens Holger Rindel of the Technical University of Denmark. In his presentation, “Sound Insulation

of Buildings,” Prof. Dr. Rindel examined the factors that have led to improvements in the quality of sound insulation design, including new building technologies and an enhanced consumer awareness of noise issues. A distinguished academician and the author of more than 100 papers and five books on building and room acoustics, Prof. Dr. Rindel stressed the importance of educating architects and professionals in the building industry on the value of sound insulation as a design parameter.

“In recent years, we have seen an increase in the minimum requirements for sound insulation in many countries and the idea of sound classification system has become more widespread,” he said. “Also, we have seen many projects of experimental houses that have shown new directions for an approach to building with better sound insulation. These are positive steps but there is still much work to do.”

A full day of poster sessions and technical sessions followed this lecture. The fifth “Noise Policy Workshop” was also scheduled on Day Two of the Congress. In a marked departure from previous workshops on the topic, this session looked at ways to engage non-technical audiences in the process of addressing the issue. Panelists spoke on the effectiveness of public pressure in influencing legislators to enact noise control policies. *(See the separate article elsewhere in this issue.—Ed.)*

“In many countries, public pressure was the force behind the movement to ban smoking in public places,” said Dr. Lang, who led the workshop series since its inception in 1999. “Perhaps the public could also be effective at helping us reduce noise in our communities.”

Dr. Lang acknowledged that involving the public in this dialog would require some



Left: Jens Holger Rindel presents the first distinguished lecture. Right: Hugo Fastl presents the second distinguished lecture.

effort and education. Workshop panelist discussed using NGO interest groups and the media to achieve this goal.

Day two concluded with a dinner cruise on the Bosphorus.

Prof. Dr. Hugo Fastl, Technical University of Munich, opened Day Three with his distinguished lecture on “Psychoacoustics, Sound Quality and Music.” A world-renowned researcher with more than 1,000 journal articles and conference papers to his credit, Prof. Dr. Fastl discussed the “dynamic loudness model and its potential to model hearing sensations such as sharpness, roughness, and fluctuation strength. He also touched on sound quality as a genuine feature for sound-dependent products like musical instruments versus sound as a by-product, like the echo of a slamming car door. Finally, a contrast was presented of psychoacoustic annoyance and sensory pleasure.

The Congress Banquet was also held on Day Three. The site was the courtyard of the famed Istanbul Archeological Museum. Under a full moon and surrounded by imposing sculptures, participants were introduced to Turkish culture through local food and entertainment. Prior to dinner,



guests had an opportunity to quickly tour the museum and view its centerpiece, the tomb of Alexander the Great.

David Ewins, Imperial College, England, presented the fourth distinguished lecture, given on the final day of the Congress. The title of his talk was “Modal Analysis and Noise: Some History, Developments, and Applications.” Ewins, a professor of vibration engineering and regular presenter on this topic, provided both an historical overview on the topic as well as a summary of recent developments in modal analysis in general and measurement processes utilizing laser technology, specifically.



David Ewins presents the third distinguished lecture.



Left: Set-up begins for the Congress Banquet. Below: Traditional Turkish music and dances are performed for the attendees at the Congress Banquet.



“Many noise problems are either structure-borne or structure-based, which is the very reason that modal analysis—measuring and analyzing the dynamic response of structures—finds application in many noise problems,” he explained.

From its beginnings more than 50 years ago as a strategy to mitigate ship noise, modal testing has matured into a sophisticated technology for validating mathematical models used in a range of structural dynamic analyses, including those for noise applications. Ewins placed special emphasis on its use in brake squeal.

The final event of INTER-NOISE 2007 was a closing reception hosted by representatives of the 2008 Congress, which will be held in Shanghai, China, 26-29 October. 

NOISE-CON 08

CONFERENCE INFORMATION AND TRAVEL PLANNING

Noise-Con 2008 and the Sound Quality Symposium 2008 30th Annual Conference of ASME's Noise Control and Acoustics Division

28-31 July 2008

Dearborn, Michigan, USA

Conference Information

Noise-Con 2008, the National Conference on Noise Control Engineering, and SQS-2008 (the third in a series of INCE-sponsored Sound Quality Symposia) will be held 28-31 July in Dearborn, Michigan. To facilitate interaction among a wide spectrum of noise control professionals, the 30th annual conference of the ASME Noise Control and Acoustics Division (NCAD) will be held in conjunction with these conferences. The venue for all three events is the Dearborn Hyatt Regency Hotel.

Noise-Con 2008 and ASME NCAD

Sponsored by the Institute for Noise Control Engineering-USA (INCE-USA), Noise-Con 2008 will feature presentations in more than a dozen technical areas. Organizers received nearly 200 abstracts for the conference, which will result in about 150 papers; the ASME NCAD is expected to add another 40-60 papers to the event. A unique feature of the conference will be special sessions that will enable INCE and ASME NCAD members to jointly present their work. Plenary lectures will be given, including one that will be hosted by NCAD as part of its annual Rayleigh Lecture series. (Biographies and abstracts of plenary speakers are on the conference Web site.) A sold-out Exposition of materials, instruments and services in the noise and vibration control field is also planned. A complete list of Exhibitors appears on page 42.

The conference will include a reception at the Ford Rouge Factory, where participants can celebrate the innovation of manufacturing in America. Highlights of this event are the virtual reality theater that provides a 360-degree look at how automobiles are made, an 80-foot high observation deck, and a walking tour of the plant where the Ford F-150s are assembled. Food and beverages will be served.

Drs. Teik C. Lim and Jay H. Kim, both of the University of Cincinnati, are the general chair and technical chair, respectively, of Noise-Con 2008. Dr. Steve Hambric, Pennsylvania State University, is the ASME NCAD organizer. Richard J. Peppin, Scantek, is the Expo manager.



Thanks to an above-plant-floor view, you'll be able to watch as actual Ford F-150 pickup trucks are being built. Photo credit: The Henry Ford

Sound Quality Symposium 2008

The Sound Quality Symposium (*SQS-2008*) will be 31 July. Dr. Patricia Davies, Purdue University, and Gordon Ebbitt, Carcoustics, will co-chair this event, which will feature a number of technical papers on topics related to sound quality including, but not limited to, monaural and binaural sound perception, perceptual factors influencing perceived product quality and annoyance, modeling of sound attributes and metrics, sound quality and environmental noise, the influence of non acoustic factors in product sound evaluation, vibration quality, application of sound quality concepts to noise control and product design. William M. Hartmann, professor of physics at Michigan State University, will deliver a plenary lecture.

Registration costs

Conference fees vary according to date of registration and number of events attended. A complete schedule of costs is given here and is also available on the conference Web site (www.inceusa.org/nc2008). Online registration is open through May 30.

Short courses

Two short courses are confirmed and more may be decided later. For those two that are confirmed, some information follows; detailed information, registration costs, and instructor biographies are available on-line at the conference Web site.

Short courses already scheduled will be held Sunday, 27 July. On-site registration is available but participants are encouraged to register in advance on-line to receive a lower rate and to ensure that instructors have enough materials.

A half-day preparation course for those interested in taking the INCE fundamentals exam will be presented from 9 a.m. to 1 p.m. by James Barnes and Eric Wood, both of Acentech. Successful completion of the exam is one way to become a full member of INCE. This course is designed to help participants understand and prepare for the exam. The exam will be given following the course as an option for participants. The exam is a two-hour, closed book, multiple choice test with 75 questions. The purpose of the exam is to evaluate an individual's background in the field of noise control engineering.

The second short course will be offered from 1 to 5 p.m. by Reginald Keith, Hoover and Keith Inc. It will provide an overview of the concepts, materials and applications for the vibration control of commonly installed mechanical equipment for commercial buildings (i.e. offices, hospitals, schools, churches, etc.). The presentation will focus on concepts, visual demonstrations and case histories, with a minimum of mathematics.

EXHIBITORS

OROS-Noise&Vibration Solutions

Data Physics Corp

Carsonite

3M Acoustic Solutions

Homasote

3M Acoustic Solutions

KineticsNoiseControl

Pyrok,Inc.

OverlyDoorCompany

ACO Pacific, Inc,

Bruel & Kjaer

G.R.A.S. Sound and Vibration.

Navcon Engineering Network

QT Impact Sound Insulation

Casella USA

PCB Piezotronics and Larson Davis

International Cellulose Corporation

PAC International, Inc.

ViAcoustics

Cooustyx: Fast Multipole Acoustics

Foamex International

Eckel Industries Inc, Acoustic Division

HEAD acoustics

SVcommunity.com

Scantek, Inc.

Sound Fighter Systems, LLC.

MaxxonCorporation

Custom Building Products

LMS

Plywall/HooverTreatedWoodProducts,Inc.

ESI Group

National Instruments

Muller-BBM VibroAkustik Systeme, Inc.

IAC America

PCB Piezotronics and Larson Davis

MSC Material Sciences Corporation

Jamison Door Company

Optinav

Carcoustics

Noise Control and Acoustics

Rousch Industries, Inc.

Vibro-Acoustics

NOISE-CON 08

Social events

On Monday evening, there will be a reception in the Expo area for all registrants. The cost of this event is included in the registration fee. Tickets for the Ford Rouge Factory Tour are available on-line. Fee covers transportation, tour, appetizers, and beverages.

Special events for students

Noise-Con 2008 will include a Student Paper Prize Competition; up to five prizes will be awarded. Winners will receive \$500 plus an additional \$500 if they attend the Noise-Con 2008 awards ceremony. If the paper is expanded and, after peer review, published in *Noise Control Engineering Journal*, the student will receive an additional \$500 award. Entry forms and guidelines can be found on the conference Web site. Social events are also planned to give students an opportunity to meet some of the more senior members of INCE. These events will give students insights into career opportunities and additional education. Networking will be an important aspect of the student events.

Venue

The venue for the conferences is the Dearborn Hyatt Regency Hotel. With more than 700 rooms, this spacious, elegant hotel offers many guest room amenities including oversized desks, 24-hour room service, high-speed Internet, coffeemakers, and morning newspapers. This suburban hotel is located minutes from downtown Detroit and the Henry Ford Museum. The hotel has a 24-hour fitness center, indoor pool, whirlpool and sauna; discounted rates for these facilities will be available to all conference participants.

A special room rate of \$146 plus tax has been negotiated for the conference. Participants can make reservations by calling (313) 593-1234. Mention that you are attending the Noise Control conferences when you are booking to get this rate. *Cut-off date for reservations is June 26, 2008, but book earlier, if possible, because the room rate cannot be guaranteed once the block of rooms has been fully reserved.*

Travel to Dearborn

Dearborn is located 13 miles from Detroit Metro Airport. One-way taxi fare is about \$30. The hotel can arrange transportation services to various locations around the area. Please ask the Concierge for information on schedules and cost.

CONFERENCE INFORMATION AND TRAVEL PLANNING

Conference Fees

COSTS				
	Advanced <i>On or before May 30, 2008 includes Noise-Con and SQS CD</i>	On-Site <i>After May 30, 2008 includes Noise-Con and SQS CD</i>	ASME NCAD Authors <i>Author of Paper Surcharge 1 required per ASME paper author (authors of multiple papers only pay the surcharge once), includes 1 copy of ASME NCAD CD</i>	ASME NCAD CD <i>(for non ASME authors)</i>
NC08 & ASME NCAD 28-30 July	\$375	\$425	Additional \$85	Additional \$30
SQS-2008 31 July	\$135 includes boxed lunch	\$150 includes boxed lunch		Additional \$30
All three conferences 28-31 July	\$430 includes boxed lunch on July 31	\$495 includes boxed lunch on July 31	Additional \$85	Additional \$30
Student Rate All three conferences 28-31 July	\$50	\$50	Additional \$30	Additional \$30

Conference Web site

www.inceusa.org/nc08

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LMS

Scantek, Inc.

Scantek Offers a New Noise Prediction Program and a Complaint Recorder

Scantek, Inc., is pleased to announce the availability of the newest enhanced product from DataKustik. The CadnaA 64-bit version of the popular environmental noise prediction program leads to an enormous performance improvement and is available now.

Calculations for large-scale projects, and very detailed projects, are limited with 32-bit software by a maximum 2GB addressable main memory. But, with the CadnaA 64-bit version, this limitation is gone! Option 64 increases the total data volume that can be processed by a factor of 4,000,000,000. Even noise maps of entire countries or large-area, detailed, 1m x 1m grids, can be calculated very fast and conveniently.

Support of up to 64GB RAM leads to an enormous increase in efficiency and an incredible performance improvement. Extensive calculations and analysis now can be done in a single run instead of one by one as done with 32-bit software. CadnaA 64-bit handles even large amounts of data (e.g. terrain model, all buildings, detailed grids) within a single project file. Partitioning of the project, calculation of overlaps, and consolidation of the calculated sections, are not necessary anymore. Project handling is now, much more efficient, timesaving and simple. For more information, go to:

<http://www.datakustik.com/en/company/news/>
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Scantek, Inc., is also pleased to announce the availability of its newest product, the NOISE NUISANCE RECORDER, N-140NNR. Often when there is an indoor or outdoor noise complaint, the acoustical engineer or enforcement office arrives at the scene when the noise is gone. This system allows documentation, analysis, and recording of the sound, all done by the complainant. Carried in an unobtrusive back-pack, the system takes

seconds to set up. The complainant need only press a button when he/she hears the noise. The analyzer does the rest. It provides an ongoing measurement and analysis of the sound level and a solid-state recording of the sound itself, along with the exact date and time of the occurrence. You have a calibrated measurement with proof of the event. Now there is no need for an expert to be present when the sound occurs.

For more information, call (800) 224-3813 or visit www.scantekinc.com.

LMS

Computational Aids for Product Noise Analysis

LMS has announced that Electrolux adopted LMS Virtual.Lab Acoustics to simulate and optimize the vibro-acoustic performance of home appliance products and to reduce the dependence on time-consuming prototype testing. The acoustic simulation software is deployed in the Core Technology Innovation Division of Electrolux, based in Porcia (Italy), which is responsible for developing innovative concepts and for supporting the primary development teams with expert services in key engineering domains such as acoustic optimization.

Electrolux is a global leader in home appliances and appliances for professional use, selling more than 40 million products to customers in 150 countries every year. The company focuses on innovations and thoughtful designs, based on extensive consumer insight, to meet the real needs of consumers and professionals. To accomplish this business goal, Electrolux is currently transforming its development process from time-consuming, test-based methods to a process that strongly builds on virtual simulation capabilities. Being a long-time user of LMS SYSNOISE, the Electrolux acoustics research team recently deployed LMS Virtual.Lab Acoustics to further accelerate their analysis of structure borne noise and to eliminate noise issues as early as possible in the development cycle.

The Electrolux engineers use LMS Virtual.Lab

Acoustics to analyze the acoustic behavior of products like refrigerators, dishwashers, washing machines and cookers. According to Marco Clara, Technical Leader of the Acoustics and Simulation Group at Electrolux, acoustic simulation allows them, for example, to assess the noise produced by a washing machine cabinet, to trace the root cause of noise issues and to change the cabinet design to eliminate them. They also simulate the radiated noise of components like motors and pumps, which are mostly supplied by external companies. In this case, they apply acoustic simulation to optimize the mounts and the housing to reduce the emitted noise.

“Comparisons of test data with simulation results have proven the accuracy and reliability of the LMS Virtual.Lab Acoustics solution for a multitude of applications,” commented Marco Clara. “It will therefore allow us to effectively replace extensive testing campaigns with simulation runs and to efficiently deliver the required acoustic profile. This will save a lot of time and resources, and will create room to explore innovative solutions, try new materials and find ways to reduce weight and material costs.”

The Electrolux research team valued the coverage of the complete simulation process in a single user environment and the tight integration of the reliable SYSNOISE acoustics solver into LMS Virtual.Lab Acoustics. “With LMS Virtual.Lab Acoustics, it is really straightforward to import design models from CATIA V5 and to run through the different steps of the acoustic simulation process, from model creation to results assessment. The integration of all these steps in a single user environment makes the software easy to use and frees up valuable time in our research group to analyze simulation results and to optimize designs,” concluded Marco Clara.

pinta acoustic, inc.

pinta Offers Vinyl-clad Sound Absorptive Materials

pinta acoustic, inc. (formerly illbruck acoustic, inc.) has introduced SONEX Clean Baffles,

Panels and Ceiling Tiles—acoustical solutions for clean-room environments and those that require cleanable, washable, durable surfaces. The products were expressly developed for bottling and food processing plants, clean rooms and food preparation areas.

“Clean rooms and food preparation areas are typically noisy due to the hard surfaces that are necessary to maintain sanitation standards,” says Joerg Hutmacher, business unit manager for pinta acoustic, inc. “With these new SONEX Clean products, even the most stringently regulated environments can have acoustical control for a more worker-friendly, productive workplace.”

SONEX Clean Baffles, Panels and Ceiling Tiles are fully encapsulated in FR taffeta vinyl and meet USDA and FDA requirements. The 2-inch thick baffles, panels and tiles are made with an ASTM E84 Class 1 fire-rated willtec® melamine foam core. Dimensions of baffles and panels are 24 inches by 48 inches and ceiling tiles are 24 inches by 24 inches.

SONEX Clean products are said to provide exceptional sound absorption to reduce reverberation in environments that typically have hard surfaces. The noise reduction coefficient ranges from 0.75 for ceiling tiles to 0.80 for wall panels and averages 8.20 sabins for baffles.

The products are available in 17 standard colors and are washable, cleanable and durable. The products are fungus and microbe resistant. SONEX Clean Ceiling Tiles are lightweight and drop into pinta acoustic and other standard ceiling grid systems. Baffles are equipped with grommets and install easily on ceiling-mounted cables or chains.

For information or to contact a distributor or representative, visit www.pinta-acoustic.com/clean or call +1 800 662 0032.

pinta acoustic, inc.

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Portugal	Laboratorio Nacional de Engenharia Civil, Lisboa
Sweden.....	Department of Applied Acoustics, Chalmers University of Technology, Gothenburg
USA.....	Graduate Program in Acoustics, The Pennsylvania State University, State College, Pennsylvania

Below is a list of congresses and conferences sponsored by International INCE and INCE/USA. A list of all known conferences related to noise can be found by going to the International INCE page on the Internet, www.i-ince.org.

2008 July 27-30

NOISE-CON 08

The 2008 National Conference on Noise Control Engineering

The conference will be held at the Hyatt Regency Dearborn, Dearborn, Michigan. The 2008 Sound Quality Symposium will immediately follow the conference.
Contact: Institute of Noise Control Engineering, INCE/USA Business Office, 210 Marston, Iowa State University, Ames, IA 50011-2153.
Tel. +1 515 294 6142 • Fax: +1 515 294 3528
E-mail: IBO@inceusa.org
Internet: <http://www.inceusa.org>.

2008 October 26-29

INTER-NOISE 2008

The 2008 International Congress and Exposition on Noise Control Engineering

Shanghai, China
Contact: Institute of Acoustics, Chinese Academy of Sciences, 21 Beisihuanxilu Road, Haidian District, Beijing, P.R. China.
Tel: + 8610-62553765 • Fax: +8610-62553898
E-mail: internoise@mail.ioa.ac.cn
Internet: www.internoise2008.org

2009 August 23-26

INTER-NOISE 2009

The 2009 International Congress and Exposition on Noise Control Engineering

Ottawa, Canada
Contact: Institute of Noise Control Engineering-USA
Pam Reinig, Congress Coordinator
INCE Business Office
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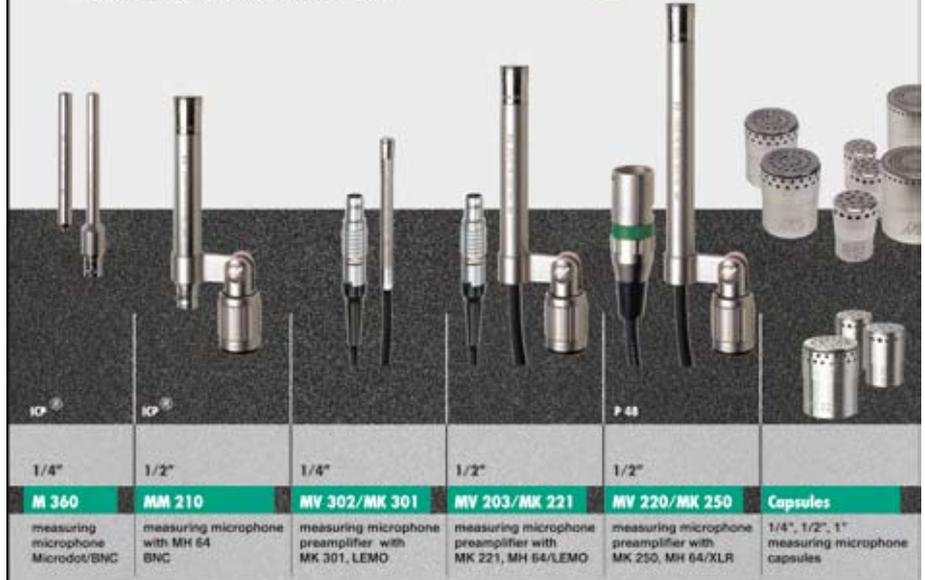
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Directory of Noise Control Services

Information on listings in the Directory of Noise Control Services is available from the INCE/USA Business Office, 210 Marston, Iowa State University, Ames, IA 50011-2153; +1 515 294 6142; Fax: +1 515 294 3528; IBO@inceusa.org. The price is USD 400 for 4 insertions.

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Mark your calendar and plan to participate!

Inter-Noise 2009

Ottawa, Canada
23–26 August, 2009

Ottawa, Canada, will be the setting for the 38th International Congress and Exhibition of Noise Control Engineering (Inter-Noise 2009). The annual Congress opens 23 August with a special ceremony, lecture and reception, and continues through 26 August. Several plenary sessions and hundreds of papers on various aspects of noise control will be presented during the four-day event. A large vendor exposition will be held during the congress and the ACTIVE09 Symposium will be held immediately before the congress.

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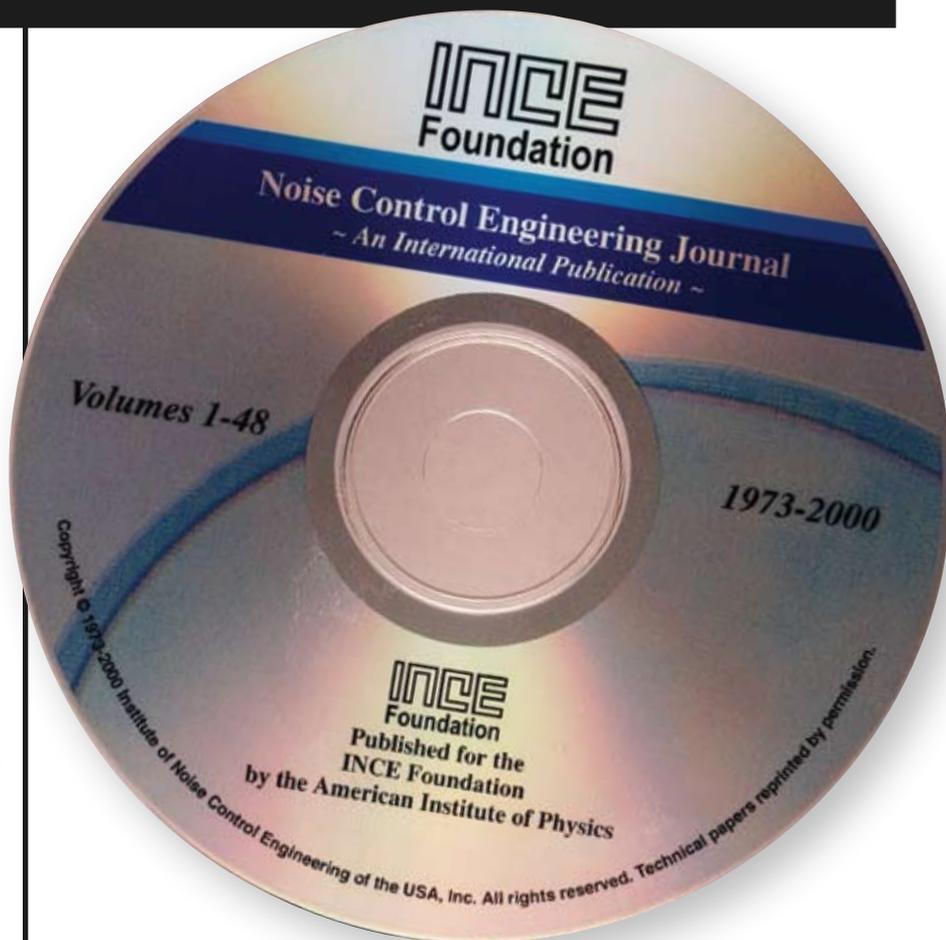
NCEJ CD: Volumes 1-48

1973-2000

In early 2005, the INCE Foundation proposed to the INCE/USA Board of Directors that a CD-ROM be created for the technical papers published in the back volumes of *Noise Control Engineering Journal (NCEJ)* from its launch in 1973 until 2000. This CD-ROM is now available in return for a gift to the Foundation of 100 or more U.S. dollars. The CD-ROM is searchable by any string of characters, and also contains three indices: the papers are indexed according to the INCE Classification of Subjects, by author, and by the papers in each issue. Links from these indices to the individual papers have been created, making retrieval easy. All papers are in PDF format. The papers from 1973 through 1992 have been scanned, and an OCR layer added; the later papers were originally created as PDF files.

INCE/USA is now publishing *NCEJ* on CD-ROM beginning with the 2001 issues. With the availability of this CD-ROM, all papers published in *Noise Control Engineering Journal* are available as PDF files.

These papers are a valuable resource of information on noise control engineering that will be of interest to researchers in the academic community, government workers, engineers, acoustical consultants, and students.



NCEJ CD ORDER FORM

Yes! I would like to make a gift to the INCE Foundation and receive the NCEJ CD described above. In the United States, gifts to the Foundation, a (501)(c)(3) non-profit organization, are deductible to the extent allowed by the IRS.

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NOISE-CON 07 CD-ROM

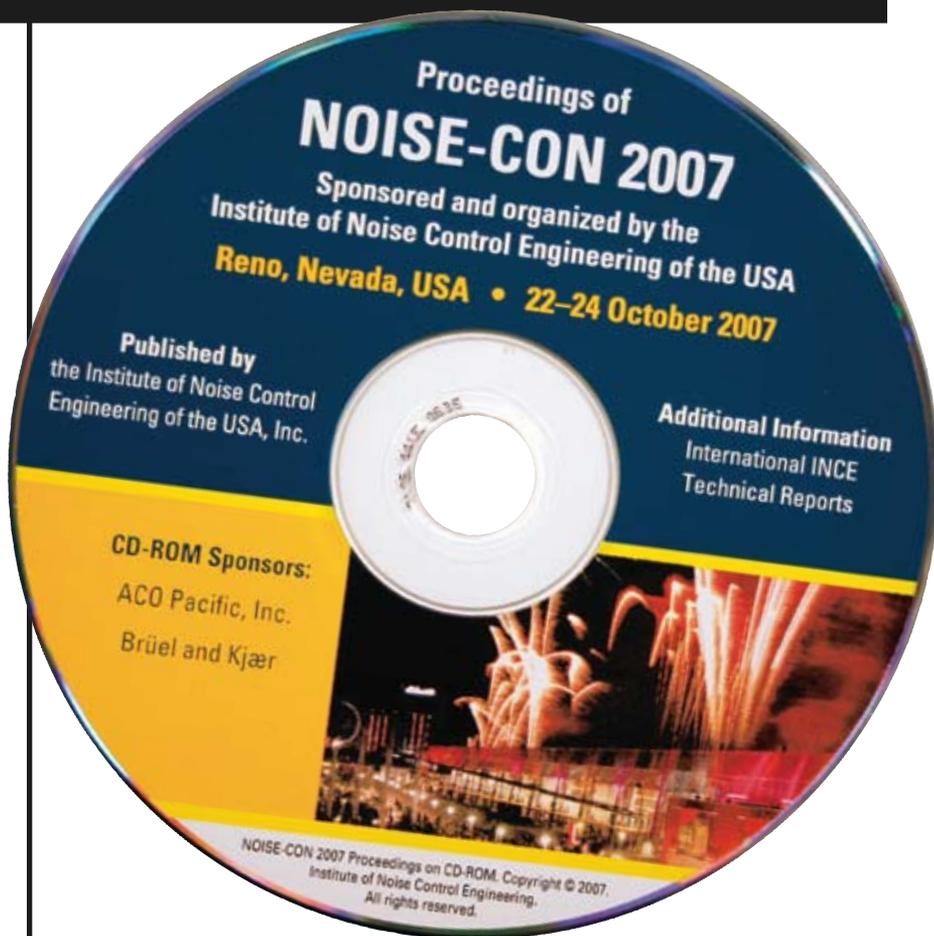
This searchable CD-ROM contains PDF files of the 188 papers presented at NOISE-CON 07, The 2007 National Conference and Exposition on Noise Control Engineering. NOISE-CON 07 was held in Reno, Nevada, USA on October 22-24, 2007. Also included on the CD are four reports published by the International Institute of Noise Control Engineering.

This CD-ROM supplements the NOISE-CON 05 CD-ROM which contains all of the papers published in NOISE-CON Proceedings beginning in 1996.

Below is a partial list of topics covered at NOISE-CON 07.

- Information technology equipment noise
- Tire/pavement interaction noise
- Noise control for hospitals
- Automotive noise
- Active control of noise
- Sound quality
- Noise from mining equipment
- Community noise
- Vibration damping for noise control
- Aircraft interior noise
- Noise control for schools
- Fan noise
- Noise from transit systems
- Sound insulation in buildings

These papers are a valuable resource of information on noise control engineering that will be of interest to engineers in industry, acoustical consultants, researchers, government workers, and the academic community.



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