

Leaflet Master Class Building Acoustics

Propagation of acoustical energy in structures

Contents

The goal of this master class is to study building acoustics in depth. For three days, you will gain theoretical knowledge and do experiments in the presence of two leading world-renowned professionals: Prof. Eddy Gerretsen from Europe and Dr. Jim Moore from the United States. The focus of this master class is on understanding how acoustical energy is transmitted in structures and its implications in the attenuation of structure-borne noise. This master class provides attendees with a unique opportunity to obtain important insights and discuss the related topics in detail. The master class lectures are complemented by workshops in calculation models and advanced sound and vibration measurements.

What will be presented?

- Theory of sound transmission: Airborne, impact and flanking sound transmission.
- Acoustical performance of building elements and junctions.
- Vibration transmission in buildings through columns and load bearing walls.
- Workshop in calculation models: Modelling of building structures and interpretation of calculation results.
- Practical experience in measuring sound and vibration.

For whom?

The master class is primarily meant for acoustics consultants with several years of experience. The participants are expected to have considerable knowledge and experience in the field of building acoustics. Also, this Master Class can be suitable/interesting for PhD students and post-doctoral research fellows. The maximum size of the group is 12 persons.

Masters

Eddy Gerretsen

Prof. E. (Eddy) Gerretsen has been scientific researcher at TNO Delft and professor at the Eindhoven University of Technology on "Structure borne sound in buildings". Eddy Gerretsen also teaches in the Dutch-Belgium Advanced Course on Acoustics in Antwerp, Belgium. He was involved in the development of calculation models in building acoustics, resulting in an active role on the development of the well-known EN 12354 standards series. One of his breakthroughs has been the introduction of the vibrational power transmission across junctions K_{ij} . He has further developed the standards for lightweight building structures as they are currently being processed within the CEN working group.



Eddy Gerretsen



Jim Moore

Jim Moore

Dr. J.(Jim) A. Moore has worked extensively to develop structure-borne vibration transmission models for buildings, submarines, helicopters and vehicles, etc. using Statistical Energy Analysis (SEA) as well as impedance representations of structural components at junctions in these systems. His work has included extensive measurements to provide empirical descriptions of the transmission for comparison. He has taught graduate level courses in acoustics and vibrations, as well as presenting lectures in short courses designed for working engineers from industry.

Dates

The Master Class will take place from Thursday 22 June through Saturday 24 June 2017.

Location

Acentech HQ, 33 Moulton Street, Cambridge, MA 02138.

Costs

The cost for attending the Master Class is:

- USD 3,000 (VAT excluded) without the stay in a hotel;
- USD 3,500 (VAT excluded) including a two night's stay in a hotel;
- USD 3,750 (VAT excluded) including a three night's stay in a hotel;
- USD 4,000 (VAT excluded) including a four night's stay in a hotel.

Also included are:

- A reader with literature and presentation sheets;
- Lunch and dinner.

For (PhD) students we will use a reduced fee, please send us an email about the possibilities.

Registration

You can register for the Master Class by filling in the paper registration form thoroughly and sending it to Level Acoustics & Vibration by mail or email. Registrations will be accepted in the order in which they are received, up to a maximum of 12 participants. After receiving the registration folder, we will send a confirmation and an invoice. The payment must be fulfilled within 30 days after receipt of the invoice. Your registration for the Master Class is confirmed after we receive the course fee. The final registration date is the 1st of May 2017.

Cancellation

If you cancel more than four weeks before the Master Class starts, the course fee will be refunded, less USD 300.00 for administration costs. If you cancel within one to four weeks before the Master Class starts, a refund of 50% of the course fee is given. If you cancelling within the last week before the Master Class starts, there will be no refund of the course fee. However, it is possible to send a substitute to follow the class, provided he or she has considerable knowledge and experience in the field of building acoustics. If there are not enough participants, Level Acoustics & Vibration has the right to cancel the Master Class, up to one week before the start of the master class. In that case, the total course fee will be refunded.

Information and registration

Level Acoustics & Vibration, attn. MSc. Nicole van Hout
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Telephone +31 40 2472700
Email n.h.a.m.v.hout@tue.nl
Internet www.levelav.nl

Download the registration form here:

<http://levelav.nl/wp-content/uploads/2017/03/reqformMCBA17.doc>

Company information

Level Acoustics & Vibration is a spin-off company of the Eindhoven University of Technology (TU/e) in The Netherlands and is located in the Laboratorium voor Akoestiek of the Faculty of Architecture, Building and Planning at the TU/e campus. The mission of Level Acoustics & Vibration is to disseminate knowledge in the field of architectural acoustics. We do this by organizing master classes, by conducting research, and by participating in inspiring projects. Multiple successful master classes on building and room acoustics took place at Level Acoustics & Vibration in Eindhoven.

Acentech is a multi-disciplinary acoustics, audiovisual, and vibration consulting firm with offices in Massachusetts, Pennsylvania, and California. A descendant of Bolt Beranek and Newman (BBN), founders of the acoustics consulting profession, Acentech is one of the oldest and largest organizations of its type, an unequalled resource to institutions, engineers, manufacturers, architects, planners, and designers worldwide. We work with clients to create environments that promote learning, productivity, and innovation.

Program (draft)

Thursday 22 June

09.00 AM - 09.30 AM	Reception with coffee
09.30 AM - 11.00 AM	Introduction and theory of sound transmission
11.00 AM - 11.30 AM	Break
11.30 AM - 12.30 PM	Theory of sound transmission
12.30 PM - 01.30 PM	Lunch
01.30 PM - 02.00 PM	Introduction workshop for measuring sound: measurement system and software
02.00 PM - 03.30 PM	Workshop for measuring sound: part 1
03.30 PM - 04.00 PM	Break
04.00 PM - 05.30 PM	Workshop for measuring sound: part 2
05.30 PM - 07.30 PM	Dinner
07.30 PM - 09.00 PM	Case studies

Friday 23 June

09.00 AM - 10.30 AM	Theory of sound/vibration transmission
10.30 AM - 12.30 PM	Working out measurement results
12.30 PM - 01.30 PM	Lunch
01.30 PM - 03.30 PM	Theory of vibration transmission
03.30 PM - 04.00 PM	Break
04.00 PM - 05.30 PM	Introduction to modelling workshop
05.30 PM - 07.30 PM	Dinner
07.30 PM - 09.00 PM	Discussion of measurement results

Saturday 24 June

09.00 AM - 11.00 AM	Workshop modeling
11.00 AM - 12.00 PM	Discussion of modelling results
12.00 PM - 01.00 PM	Lunch + Conclusion