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Graz, 27. Okt. 2016

Invitation for a Guest Lecture

Dear colleagues,

I want to invite you to the guest lecture

„Room Acoustics – Hypotheses, Concepts, Examples“

by Prof. Dr.Ing. Helmut V. Fuchs
Casa Acustica, Berlin

when: November 7th - November 17th

Monday, Thursday: 10:15 - 11:45 and 14:15 - 15:45

Tuesday, Wednesday: 09:15 - 10:45 and 13:15 - 14:45

where: Seminarroom CGV (ID02104, Inffeldgasse 16c, 2nd floor)

tugonline course:

442.192 Advanced Acoustics and Audio Engineering A

442.193 Advanced Acoustics and Audio Engineering B

(part of WFK "Acoustics and Recording Engineering" in master programme "Electrical Engineering and Audio Engineering")

For an abstract and short biography, see next page. Please forward this invitation to your colleagues.

Hope to see you there!



Gerhard Graber

Abstract

How can we tell in a room if the acoustics is good or bad? And what measures can we take to change the acoustic in such a way that music performances sound clear and speech intelligibility is improved? Often we measure the room impulse response and calculate the reverberation time, and decide according to guidelines in specific standards if we can alter the room configuration to improve the acoustic situation. A well-known problem, however, is that the low frequency range is neglected and the acoustic improvements are not as effective as expected.

Prof. Fuchs gives a comprehensive overview of materials and components for noise control and acoustical comfort. Sound absorbers must meet acoustical and architectural requirements, which fibrous or porous material alone can meet. Basics and applications are demonstrated, with representative examples for spatial acoustics, free-field test facilities and canal linings. Students as well as Acoustic engineers and construction professionals will find some new basic concepts and tools for developments in order to improve acoustical comfort. Interference absorbers, active resonators and micro-perforated absorbers of different materials and designs complete the list of applications.

Books:

- 1) Helmut V. Fuchs: Schallabsorber und Schalldämpfer, Springer 2010
- 2) Helmut V. Fuchs: Applied Acoustics: Concepts, Absorbers, and Silencers for Acoustical Comfort and Noise Control, Springer 2013

Biography

Prof. Dr.-Ing. Helmut Fuchs studied Electrical Engineering at TU Berlin and received his PhD under the supervision of L. Cremer and R. Wille. He worked at the German Aerospace Center (DLR) in Berlin and Oberpfaffenhofen, at the Institute of Sound and Vibration Research at the University of Southampton, and the Unsteady Flow Physics and Aeroacoustics Laboratory at Stanford University. In 1979 he founded the Acoustics Department at Fraunhofer IBP in Stuttgart and dedicated his time to applied research, and the development of innovative products in various fields of noise insulation. In 1986 he became Professor for Building Acoustics and Noise Control at the University of Applied Sciences in Stuttgart, and as of 1995 he was deputy head of the IBP and head of the Department of Architectural Acoustics/Technical Acoustics of the IBP. In 2004 he was awarded the European Grand Prix for Innovation.

He has so far published more than 500 papers in technical journals and articles in newspapers, many of these in English. In 2010 he published his book on innovative sound absorbers „Schallabsorber und Schalldämpfer“ (Springer 2010), in 2013 the book was translated to English: „Applied Acoustics: Concepts, Absorbers, and Silencers for Acoustical Comfort and Noise Control / Alternative Solutions – Innovative Tools – Practical Examples“

Today he dedicates his time to develop innovative acoustic absorbers, focusing on the low frequency range and noise control in general. Moreover since 2013 he and his wife, Prof. X. Zha, are heads of the non-profit foundation Casa Acustica for better hearing, understanding, learning, communicating and music making.