

## THE EVOLUTION OF COMMUNICATION ACOUSTICS - AND ITS IMPACT ON ROOM ACOUSTICS

---

Those aspects of acoustics which concern the relations of acoustics to the information and communication technologies are nowadays called "Communication Acoustics".

After a short historical review, the typical structure of problems in this field will exemplarily be discussed in the light of two relevant research areas, both dealing with parametric representation of auditory scenes, namely,

- Computational Auditory Scene Analysis (CASA), and
- Aural Virtual Reality (VR).

I will be argued that modern communication-acoustical systems and components require more and more built-in explicit knowledge. Particularly, the specification and development of such systems and components calls for data and knowledge from the cognitive sciences and from the arts.

Among other things, this evolution of communication acoustics is about to prompt a change of paradigms in architectural acoustics. Modern tools and modern audio and multimodal technology, as provided by communication acoustics, allow for more creativity at the part of the acoustical consultants. Consequently, acoustical consultants tend to become architects themselves, namely, "aural architects".

### References:

- Blauert, J. (2005), Analysis and synthesis of auditory scenes, in: J. Blauert (ed.), Communication Acoustics, 1-26, Springer, D-Berlin, D-Heidelberg, New York, N.Y.
- Blauert, J. & Jekosch, U. (2007) Auditory quality of concert halls - the problem of references. Proc. 19th Int. Congr. Acoust., ICA 2007 Madrid, paper RBA 06-004, Soc. Espanola de Acoustica, ES-Madrid

Key-note lecture, presented to the Hellenic Institute of Acoustics, GR-Xanthi, Sept. 2008

The accompanying .mp3 sound file has been recorded at the same occasion.

Copyright note:

The material is not in the public domain.  
However, permission to copy it is granted  
under the condition that proper reference is  
given to the author.

---

Jens Blauert, Emeritus Professor of Acoustics

Institute of Communication Acoustics  
Ruhr-Universitaet Bochum  
D-44780 Bochum, Germany

Tel.: +49 234 322 2496 (direct: 3480)

Fax: +49 234 321 4165

e-mail: [jens.blauert@rub.de](mailto:jens.blauert@rub.de)

<http://www.rub.de/ika>

---