

Interdisciplinary Topics in Acoustics: Physiology and Virtual Reality

The 12th DEGA symposium with the title "*Interdisciplinary topics in Acoustics: Physiology and virtual reality*" has the goal to connect researchers and scientists working in the fields of physiological and virtual acoustics. These two fields have both a high relevance for society and a huge potential for application and innovation, supported by increasing rate of technological development.

A basic understanding of the physiological basis of sound processing is not only required to develop novel technologies, but also required to tackle the increasing challenge of hearing impairment in our society. New developments in the field of virtual acoustics allow, besides novel applications in audio industry, to generate and control complex sound fields with high precision as required in scientific experiments. These two fields together bear the potential to make large progress in the understanding of signal processing in the auditory system of humans, way beyond classical approaches.

The program is organized by the special interest group of Hearing Acoustics of the German Acoustical Society (DEGA).

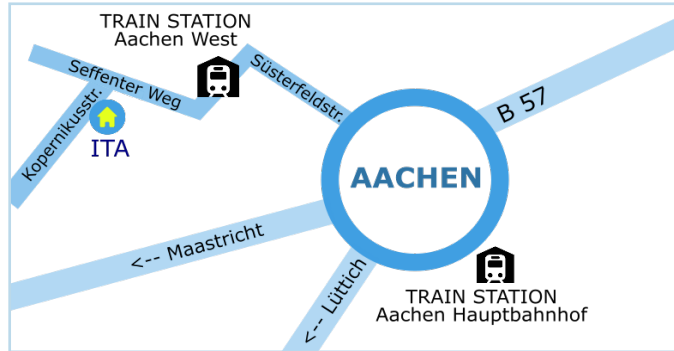
Coordination: Janina Fels und Bastian Epp



The 12th DEGA Symposium
is kindly supported by
HEAD acoustics GmbH

Venue and Travelling

RWTH Aachen University
Institute of Technical Acoustics (ITA)
Kopernikusstr. 5
52074 Aachen - Germany
Web: www.akustik.rwth-aachen.de



How to get there:

From Train Station Aachen West:

5-minute walk from station (see map)

From Train Station Aachen Hauptbahnhof:

Take Bus 3A to Mies-van-der-Rohe-Strasse (20 min)

Regular train connections from Köln, Frankfurt/Main and nearby airports (Frankfurt, Brussels, Dusseldorf)

Contact

Deutsche Gesellschaft für Akustik e.V.
German Acoustical Society
Alte Jakobstraße 88
10179 Berlin - Germany
Tel.: +49 - (0)30 / 340 6038-00
Fax: +49 - (0)30 / 340 6038-10
E-Mail: dega@dega-akustik.de
Web: www.dega-akustik.de



Interdisciplinary Topics in Acoustics: Physiology and Virtual Reality

12th DEGA Symposium

17 to 18 September 2018 in Aachen, Germany

**Deutsche Gesellschaft
für Akustik e.V.**



Program of Symposium

Monday, 17 September

- 18:00 **Keynote Speech by Georg Klump:**
What animals can teach us about human hearing.
Carl von Ossietzky Universität Oldenburg, Department of Neuroscience, Animal Physiology and Behavior
- 18:45 **Tour of venue: ITA Institute**
Institute of Technical Acoustics, RWTH
- 19:30 **Dinner (optional, please register)**
Please note: Dinner is not included in fee.



Online Registration

Registration at:

www.dega-akustik.de/anmeldung-zu-veranstaltungen

Registration classes:

- A ▶ 60 € general fee
 - B ▶ 15 € reduced student fee
- optional: dinner on 17 Sep (not included in fee)

Please register by 10 September 2018.

Tuesday, 18 September – morning

- 8:00 **Morning Coffee**
- Welcome Address by Michael Vorländer**
8:30 President of German Acoustical Society (DEGA);
RWTH Aachen University, Institute of Technical
Acoustics
- 8:45 **Introduction by Janina Fels and Bastian Epp**
- Jesko Verhey:**
9:00 ***Virtual reality in psychoacoustics and audiology?***
Otto von Guericke Universität Magdeburg,
Department of Experimental Audiology
- Lutz Wiegrebe:**
9:45 ***Guided by Sound***
Ludwig-Maximilians-Universität Munich,
Division of Neurobiology
- Sarah Verhulst:**
10:40 ***Model-based design of subcortical EEG methods to quantify the synaptopathy aspect of hearing loss***
Ghent University, Hearing Technology Lab
- Bastian Epp and Suyash N. Joshi:**
11:25 ***A plan to link physiological to perceptual limits of CI performance - combining modeling, behaviour and imaging techniques.***
Technical University of Denmark, Department of
Electrical Engineering
- 12:15 **Lunch**

Tuesday, 18 September – afternoon

- 13:15 **Björn Kampa:**
Neural circuits for multisensory integration
RWTH Aachen University, Department of
Molecular and Systemic Neurophysiology
- André Rupp:**
14:00 ***Magnetoencephalography: Large-scale neurodynamics to bridge the gap between acoustical properties, auditory modelling and perception***
Heidelberg University Hospital, Department of
Neurology, Section of Biomagnetism
- 14:45 **Summary and discussion**
- 15:00 **Coffee break**
- Janina Fels, Florian Pausch, Josefa Oberem and Karin Loh:**
15:25 ***Novel approaches towards more realistic listening environments for experiments in complex acoustic scenes***
RWTH Aachen University, Institute of Technical
Acoustics, Medical Acoustics Group
- Volker Hohmann:**
16:00 ***Audiovisual Virtual Reality for Audiology and Hearing Aid Evaluation: Potential, requirements and limitations***
Carl von Ossietzky Universität Oldenburg,
Department of Medical Physics and Acoustics
- 16:45 **Summary and discussion**
- 17:00 **Closing**
Janina Fels and Bastian Epp