

# INTERNATIONAL PROGRAMMES

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### **Doctorate**





# **Biomedical Engineering and Science of Hearing and Sensory Systems**

Carl von Ossietzky University of Oldenburg • Oldenburg

### Overview

Degree	Dr rer nat, Dr-Ing, Dr med, PhD (depending on the faculty)
In cooperation with	Hearing4all (a DFG-funded Cluster of Excellence, which is a collaboration of the University of Oldenburg, Hannover Medical School and Leibniz Universität Hannover)
Teaching language	• English
Languages	Courses are generally held in English. The opportunity to take German language courses is provided. Participants write their theses in English.
Mode of study	Less than 50% online
Programme duration	6 semesters
Beginning	Winter and summer semester
Application deadline	Applications are possible at any time. Enrolment will be on 1 April or 1 October each year.
Tuition fees per semester in EUR	None
Combined Master's degree / PhD programme	Yes
Joint degree / double degree programme	No
Description/content	The Joint Research Academy in Biomedical Engineering and Science of Hearing and Sensory Systems (JRA) is a joint project of the University of Oldenburg, Hannover Medical School and Leibniz Universität Hannover and focuses on interdisciplinary graduate education.
	Our research interests cover a broad spectrum of fundamental research, clinical application as well as translational approaches in neurosensory science, hearing research, communication technology and auditory rehabilitation within the Cluster of Excellence "Hearing4all".
	We provide a structured, three-year PhD programme focusing on research fields, such as
	<ul> <li>Neurosensory Science and Systems (University of Oldenburg) https://uol.de/en/phd-neurosensory-science/</li> <li>Auditory Sciences: Physics and Engineering, Physiology and Therapy of Hearing (Hannover Medical School, University of Oldenburg)</li> <li>https://www.neuroprostheses.com/AuditorySciences/Main.html</li> </ul>

 Biomedical Technology with a focus on audiological sciences (Leibniz Universität Hannover)

as well as intensive, postgraduate education for physicists, engineers, psychologists, biologists, medical researchers and clinicians.

Furthermore, the programme offers training in transferable skills to strengthen personal competences of future leaders in academia and industry.

### **Course Details**

#### Course organisation

The main objective is empowering young academics to develop themselves into well-trained and independent members of the scientific community. Core to the programme is a doctoral research project in one of the research groups of the Cluster of Excellence "Hearing4all". This is accompanied by a curriculum that aims to perfect scientific knowledge and personal skills alike. Of particular importance is the attendance of summer schools, conferences and research stays, allowing PhD students to build their own professional networks in the interdisciplinary and international framework of hearing research.

Graduate students enrol in the structured, three-year PhD programmes of Oldenburg Graduate School "Science, Medicine and Technology" (OLTECH - https://uol.de/en/oltech/) or Hannover Biomedical Research School (HBRS - https://www.mhh.de/hbrs) within a joint curriculum. Leibniz Universität Hannover provides enrolment in the respective faculties.

The curriculum contains three main topics:

#### • Specific scientific knowledge:

Enhancement of scientific knowledge in the context of the individual research project and the multidisciplinary perspective of hearing research as well as active participation in research seminars, congresses, summer schools and lab visits abroad. Examples of courses include:

"Clinic, Diagnostic and Therapy of Peripheral and Central Hearing Disorders", "Introduction to Biomaterials, Laser Spectroscopy and Microelectronics" and "Fundamentals in Auditory Physiology".

#### Communication competences:

Training in communicative skills, presentation techniques, language skills and knowledge transfer.

### Interdisciplinary competence and transferable skills:

Training for career advancement in academia or industry with a focus on data management and statistics, scientific writing and publishing, writing proposals for grants and funding as well as training of personal skills for job applications and interviews.

### A Diploma supplement will be issued

Yes

#### International elements

- International guest lecturers
- Projects with partners in Germany and abroad
- Language training provided

### Teaching/work obligations or opportunities

In accordance with the job description in the dissertation project or requirements for specific stipends  $\frac{1}{2} \int_{-\infty}^{\infty} \frac{1}{2} \int_{-\infty}^{\infty} \frac$ 

### Special promotion / funding of the programme

• DFG (e.g. Research Training Groups)

### Course-specific, integrated

No

German language courses	
Course-specific, integrated English language courses	No

### Online learning

Pace of course	Mixed (e.g. fixed exam dates and duration, study content can be studied at any time)
Phase(s) of attendance in Germany (applies to the entire programme)	Yes, compulsory
Types of online learning elements	<ul> <li>Online sessions</li> <li>Online study material provided by institution</li> <li>Video learning (Pre-recorded videos, Vlogs, Video-Podcasts)</li> </ul>

### Costs / Funding

Tuition fees per semester in EUR	None
Semester contribution	Approx. 400 EUR (University of Oldenburg) Approx. 360 EUR (Hannover Medical School) Approx. 405 EUR (Leibniz Universität Hannover)  These semester contributions all include public transport in Oldenburg, Hannover and the region of Lower Saxony.
Costs of living	You should expect to spend about 850-900 EUR per month to cover personal expenses (accommodation, health insurance, food, clothes).
Funding opportunities within the university	No

### Requirements / Registration

Academic admission requirements	A Master's degree (or equivalent) in physics, biology, neuroscience, psychology, biomedical engineering, computer science or an equivalent subject is required.
Language requirements	English skills are ascertained during the interview process. Non-native English speakers can provide a certificate of at least CEFR level B2 (TOEFL or others) as additional information. As an alternative, a supervisor's confirmation of English skills can be provided.
Application deadline	Applications are possible at any time. Enrolment will be on 1 April or 1 October each year.

Submit application to

Applications containing a letter of intent, CV and one letter of recommendation should be sent as a single PDF document via e-mail to:

jra@hearing4all.de

### **Services**

Possibility of finding part-
time employment

Admission to the programme is only possible for PhD students who already hold a scholarship or are employed at one of the participating universities! Open positions and stipends are offered for numerous projects of the Cluster of Excellence "Hearing4all". For current job offers and stipends, please visit https://hearing4all.de/en/career/open-positions/.

#### Accommodation

For Oldenburg, please visit: https://www.studentenwerk-oldenburg.de/en/internationale-studierende/accomodation-in-oldenburg.html and https://www.studentenwerk-oldenburg.de/en/internationale-studierende/privatzimmervermittlung-fuer-internationale-studierende.html. For general information on accommodation in Oldenburg see also: https://uol.de/en/international-researchers-and-staff/living-in-oldenburg/finding-accommodation

For Hannover, please visit: https://www.mhh.de/hbrs/hbrs/coming-to-hannover and https://www.studentenwerk-hannover.de/en/wohnen/uebersicht

### Structured research and supervision

Yes

### Research training / discussion

Yes

#### Career advisory service

Mentoring programme, career coaching, workshops on career development, career days

# Support for international students and doctoral candidates

- Tutors
- Accompanying programme
- Buddy programme

#### General services and support for international students and doctoral candidates

International Offices at the contributing universities offer information and assistance for international PhD students and researchers in all matters concerning their stay:

University of Oldenburg: https://uol.de/en/international-researchers-and-staff

Leibniz Universität Hannover: https://www.uni-hannover.de/en/universitaet/internationales/wegenach-hannover

Hannover Medical School: https://www.mhh.de/en/international



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## Bojana Mirkovic

Coming from an engineering background, I was glad to have an opportunity to learn more about other research areas and methods in the Cluster of Excellence "Hearing4all". This experience helped me shape a bigger picture. Attending JRA specialisation courses and summer schools is a very good way to broaden your knowledge and expand your social network. I believe that JRA offers great support and career guidance for young scientists – a very welcome option at the beginning of your research career.

### **Our Partners**





### Hearing4all Corporate Video

Hearing4all aims at improving hearing experience for all – all people, all situations, at all times. This includes the improvement of audiological diagnostics, powerful rehabilitative strategies and individualised medical treatment. Our work focuses on fundamental, model-based research for diagnostics and the auditory profiling of human hearing.

#### » more:

https://www.youtube.com/watch? v=XuFC5y1cqkc

## Carl von Ossietzky University of Oldenburg

The Cluster of Excellence "Hearing4all" is a joint project of three universities. It offers a joint PhD programme of Oldenburg Graduate School "Science, Medicine and Technology" (OLTECH) and Hannover Biomedical Research School (HBRS). It combines basic and applied research, and it endeavours to achieve a breakthrough in hearing research and auditory rehabilitation.

The **University of Oldenburg** is a young, research-oriented university with about 16,000 students. It focuses on research fields such as sensory neurobiology and medical physics. A special focus is on hearing research with emphasis on basic research and hearing assistance for patients with mild to moderate hearing loss who are usually provided with conventional hearing aids or are to receive support from consumer electronic products.

Hannover Medical School is an internationally renowned medical school with about 3,800 students, offering multiple PhD programmes and excellent research centres in the fields of biomedical and clinical research. The Clinic for Laryngology, Rhinology and Otology contributes extensively to the PhD programme and specialises in the care of patients who suffer from a moderate to complete loss of hearing and are treated with cochlear implants.

**Leibniz Universität Hannover** (about 28,000 students) provides a wide range of study programmes. The main research focus lies on natural sciences and engineering. With regard to hearing research, the emphasis is on developing new technological solutions for auditory diagnostics and hearing implants of the future.



### University location

Oldenburg is a growing town of about 170,000 inhabitants and a high quality of lifehttps://www.oldenburg.de/sprachversionen/gb.html

**Hannover** is the capital of the German state Lower Saxony with about 550,000 inhabitants and one of the major cultural centres of northern Germany: https://www.hannover.de/en

### **Contact**

#### Carl von Ossietzky University of Oldenburg

Department of Neuroscience Exzellenzcluster Hearing4all

Prof Dr Georg Klump

Carl-von-Ossietzky-Str. 9-11 26129 Oldenburg

georg.klump@uni-oldenburg.de

Course website: https://hearing4all.de/en/career/joint-research-academy/

Prof Dr Andrej Kral

Tel. +49

Prof Dr Cornelia Blume

Tel. +49

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### International Programmes in Germany - Database

www.daad.de/international-programmes www.daad.de/sommerkurse

#### Editor

DAAD - Deutscher Akademischer Austauschdienst e.V. German Academic Exchange Service Section K23 – Information on Studying in Germany Kennedyallee 50 D-53175 Bonn www.daad.de

#### **GATE-Germany**

Consortium for International Higher Education Marketing www.gate-germany.de

#### Disclaimer

The data used for this database was collected and analysed in good faith and with due diligence. The DAAD and the Content5 AG accept no liability for the correctness of the data contained in the "International Programmes in Germany" and "Language and Short Courses in Germany".

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