

Education

since 05/2018

PhD Student

Chalmers University of Technology, Gothenburg, Sweden.

Proposed PhD project “Preservation of Perceived Spaciousness in Binaural Rendering of Spherical Microphone Array Recordings”, starting with the creation of a complete real-time processing pipeline for dynamic binaural reproduction of high-order spherical microphone arrays. The implementation will be used in following user studies to evaluate perceptual influences of processing methods and real-world limitations like microphone self-noise. Teaching activities in different courses for the graduate program “Sound and Vibration”.

2018

Master of Science “Audiocommunication & -technology”

Technische Universität Berlin (TU), Berlin, Germany.

Focused on lectures in acoustics, psychoacoustics, audio technology, digital signal processing and virtual acoustics. Additional lectures at University of the Arts (UdK), Berlin, Germany in electrical engineering, aural theory and studio recording techniques.

2013

Bachelor of Science “Applied Computer Science”

University of Applied Sciences (HTW), Berlin, Germany.

Focused on lectures in multimedia, digital image processing and computer graphics. Lessons about principles of audio capturing, processing and storing technologies. Got the scholarship “Deutschlandstipendium” from the country of Germany and the university. Graduated as best student of the year.

Employment

01/2015 – 03/2018

Student Assistant as a Technical Support Specialist

University of the Arts (UdK), Berlin, Germany.

Technical assistance for the employees of the chair of musicology. Concept and maintenance of the chairs own both computer systems and cloud storage or backup solution.

09/2015 – 12/2017

Student Assistant as a Research Assistant

Technische Universität Berlin (TU), Berlin, Germany.

Tutor for virtual acoustics and involvement in multiple listening test and studies. Technical support for wave field synthesis and Ambisonics systems of the research group. Coworker of the SEACEN project funded by the German Research Foundation (DFG).

10/2016 – 03/2017

Student Assistant as a Research Assistant

Staatliches Institut für Musikforschung (SIMPK), Berlin, Germany.

Design and implementation of empirical user studies for auditory and visual interaction in the range of music perception. The SIMPK is part of the “Stiftung Preußischer Kulturbesitz”, a charitable foundation under public law.

- 06/2014 – 09/2014 **Software Developer**
German Aerospace Centre (DLR), Munich, Germany.
Implementation of a database application for future satellite projects at DLR.
- 03/2013 – 08/2013 **Software Developer**
German Aerospace Centre (DLR), Munich, Germany.
Cooperation with DLR in writing and implementation of Bachelor thesis. Addressed topic was a simulation concept to train emergency procedures for astronauts on the International Space Station (ISS). Responsible for customization and maintenance of the applied computer hardware (cluster of PCs and projectors).
- 03/2012 – 08/2012 **Student Assistant as a Software Developer**
University of Applied Sciences (HTW), Berlin, Germany.
Programmed a Virtual Reality application using different kinds of man-machine interaction. The software was presented to visitors at the "Long Night of the Sciences" in Berlin successfully.
- 02/2011 – 02/2012 **Audio Video Store Clerk and Software Developer**
Audio Forum, Berlin, Germany.
Implemented custom made user interfaces to remote control home theater equipment. The realized projects were carried out by home installation in special consideration of the customers living environment.

Links & Publications

- <http://www.ta.chalmers.se/people/hannes-helmholtz/>
- https://www.researchgate.net/profile/Hannes_Helmholtz
- <https://tu-berlin.academia.edu/HannesHelmholtz>
- https://www.xing.com/profile/Hannes_Helmholtz/cv

References are available on request.