

Research Associate / PhD Student in Spatial Nonlinear DNN Processing for Hearing Devices (f/m/d)

Position: Full/Part-Time
Location: Hamburg Informatics Technology-Centre e.V. (HITeC) / Universität Hamburg
Start Date: As soon as possible
Duration: Initially 3 years

Who We Are:

HITeC, the research and technology transfer hub of the Department of Informatics at the University of Hamburg, invites applications for an exciting opportunity to join our team as a Research Associate / PhD Student. HITeC specializes in application-oriented research, collaborating with industrial partners and research institutions globally. We are a non-profit society driven by the innovative spirit of the University's Department of Informatics.

The project is led by the Signal Processing (SP) research group, renowned for its innovative contributions to machine learning methods in speech signal processing. The project will be carried out in cooperation with a leading manufacturer of hearing devices whose state-of-the-art solutions help improve auditory experiences around the world.

Who We Are Looking For:

We are seeking a highly motivated individual with a Master's degree in Computer Science, Electrical Engineering, or a related field, eager to contribute to groundbreaking research in signal processing and machine learning. The ideal candidate will possess:

- Strong expertise in statistical signal processing, machine learning and deep learning.
- Proficiency in Python and familiarity with modern machine learning libraries.
- Experience in speech and audio processing.
- Fluent English communication skills, both written and spoken.

Project Overview:

In real-world environments, clear speech communication can be hindered by ambient noise and competing voices. Modern hearing devices incorporate speech enhancement methods to facilitate better understanding. This project aims to develop robust, controllable Deep Neural Network (DNN)-based multichannel speech enhancement techniques for hearing devices, leveraging spatial diversity from multiple microphones. Our goal is to advance beyond current conventional multichannel methods, enhancing performance and reliability using state-of-the-art deep neural networks.

What We Offer:

Joining HITeC means becoming part of a dynamic, international research team tackling diverse industrial and academic challenges. You will have the chance to work closely with the industry partner of this project, pursue a PhD under the mentorship of the renowned Signal Processing research group at the University of Hamburg, and engage with a network of fellow researchers.

Responsibilities include developing innovative solutions for the project, authoring scientific publications, and presenting findings at conferences. This offers the opportunity to engage in cutting-edge research within a supportive and vibrant academic environment.

We offer a competitive salary aligned with the German public sector tariff ("Tarifvertrag der Länder," TvL).

HITeC is supporting gender equality. Since women are currently underrepresented in STEM disciplines, we especially encourage female applicants to apply. Equally qualified and suitable female applicants will receive preference. Qualified disabled candidates or applicants with equivalent status receive preference in the application process.

How can you apply?

Applications should include the following documents and be sent as a single PDF with the subject line "Application: Spatial DNN" to sp-office.inf@hitec-hamburg.de by 12.01.2025:

- Curriculum Vitae
- Letter of motivation
- Degree certificates
- Transcripts of record

We look forward to receiving your application and exploring the potential for you to join our team, contributing to impactful research in speech enhancement technology.

Timo Gerkmann
HITeC e.V. c/o Universität Hamburg