

# Curriculum Vitae



**Sneha Das**

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RESEARCH INTERESTS	Machine-learning and signal processing for speech and audio, Multi-sensory data modelling, Privacy in speech-interfaces, Trustworthy AI, Coding and enhancement in ad-hoc virtual sensor networks	
CURRENT EMPLOYMENT	<b>Post-doc</b>	Dec. 2020 – Ongoing
	Statistics and Data Analysis, Department of Applied Mathematics and Computer Science, Technical University of Denmark, Denmark.	
EDUCATION	<b>PhD</b> , Speech and Language Technology	Oct. 2016 – Nov. 2021
	Department of Signal Processing and Acoustics, Aalto University, Finland	
	<b>Master of Science</b> , Communication and Multimedia Engineering	Oct. 2013 – Mar. 2016
	Friedrich-Alexander Universität Erlangen-Nürnberg, Germany	
	<b>Bachelor in Engineering</b> , Electronics and Communication	Sep. 2009 – Aug. 2013
	BMS Institute of Technology, Bangalore, India	
RESEARCH EXPERIENCE	<b>Multi-sensory Data Modelling for the Prediction and Intervention in Child and Adolescent Obsessive-Compulsive Disorder (OCD)</b>	
	<i>In collaboration with Region Hovedstadens Psykiatri, Copenhagen</i>	December. 2020 – Present
	On modelling OCD behavior from audio, video and biosignals with the long term goal of developing tools that aid in intervention and therapy.	
	<b>Robust and Efficient Methods for Distributed Speech Processing – Perspectives on Coding, Enhancement and Privacy</b>	
	<i>Doctoral Thesis</i>	Oct. 2016 – Nov. 2021
	On developing enhancement algorithms to address quality degradation in the compressed transmission of speech and audio. We delve into low-complexity data-driven approaches, incorporating domain knowledge to improve the efficiency of the algorithms.	
	<b>Privacy Studies in Speech Interfaces</b>	Apr. 2017 – Sep. 2020
	On quantifying and modeling the perceptions of privacy in different acoustic scenes and conducting user research on the expectations of privacy and notification modalities of smart-speakers.	
	<b>Source Modeling Based on Higher-Order Statistics for Speech Enhancement Applications</b>	
	<i>MSc Thesis</i>	Aug. 2015 – Mar. 2016
	Spectral envelope based mask estimation for speech enhancement using distribution quantizer.	

TEACHING  
EXPERIENCE

**Technical University of Denmark**, Denmark

Aug. 2020 – Ongoing

- Course assistant for PhD level course on Computational data analysis.
- Co-supervisor: three MS theses, one BSc project.

**Aalto University**, Finland

- Teaching assistant for Master’s level course on Speech Processing. 2017 – 2019
- Co-supervisor: one MS theses, one MS project.

**AudioLabs-Fraunhofer IIS**, Germany

2014 – 2016

*Graduate Research Assistant*

**Indian Institute of Science**, Bangalore, India

Jul. 2013 – Sep. 2013

*Project Assistant*

AWARDS AND  
MERITS

**Nokia Foundation scholarship** in Information and Communications Technology for doctoral studies (2020).

**Scholarship** by the Kansallis-Osake-Pankki foundation for teachers in the field of technology.

**Best Project Award** at state (Karnataka) level for Bachelor thesis, “Gait prediction of the prosthetic limb synchronized to functional limb”, India, 2013

**Won sponsorship** for Bachelor thesis by Karnataka State Council for Science and Technology (KSCST), India, 2013

**Certificate** of merit by the Central Board of Secondary Education (CBSE), India for being among top 0.1% of the total test takers (100000 students), 2007.

TECHNICAL SKILLS

- Programming Languages:
  - Expert level: Matlab, Python
  - Basic level: R, C, HTML
- ML-tools: Pytorch, Tensorflow (basics)
- Platforms: Linux
- Others:  $\text{\LaTeX}$ , JSON, Android and iOS development (basics)

OTHER ACTIVITIES

- Member of **Local Collaboration and Work Environmental Committee** (Lokale Arbejdsmiljø- og Samarbejdsvalg LASU), DTU Compute (2020 – present)
- Member of the **Diversity working group**, DTU Compute (2020 – present)
- **Co-organizer** of the ISCA SIG on Security and Privacy in Speech Communication (SPSC) monthly journal club.
- **Session chair** and program team, (**MyData conference, 2019**)
- **Secretary & Serving Board member** (2019, 2020) of the **Aalto University Doctoral Students Association** (Aallonhuiput)
- Program team and volunteer for MyData Conference since 2017–2019.

PERSONAL DETAILS

Date of birth	13 <sup>th</sup> June, 1991
Place of birth	Kolkata, India
Languages	English, Bengali, Hindi, Danish (DU3 module 2), German (A3)