Soumitro Chakrabarty

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EDUCATION

FRIEDRICH-ALEXANDER-UNIVERSITÄT ERLANGEN-NÜRNBERG (FAU)
DR. ING. (PHD.)
Oct. 2019 | Erlangen, Germany

ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (EPFL)
M.SC. IN COMPUTER SCIENCE
Apr 2013 | Lausanne, Switzerland

MANIPAL UNIVERSITY
B.E. IN ELECTRONICS & COMMUNICATION ENGINEERING
May 2010| Manipal, India

LINKS

Website:// **soumitrochak**
LinkedIn:// **soumitrochak**
Google Scholar:// **soumitrochakrabarty**
GitHub:// **soumitrochakrabarty**

SKILLS

PROGRAMMING
Python • MATLAB
FRAMEWORKS
Pytorch • Keras • Tensorflow

ACADEMIC ACTIVITIES

GUEST EDITOR
Frontiers in Signal Processing

REVIEWER

Journals
IEEE/ACM Tansacations on Audio, Speech and Language Processing • IEEE Transactions on Aerospace and Electronic Systems • IEEE Signal Processing Letters • Journal of Acoustic Society of America • IEEE Journal of Selected Topics in Signal Processing

Conferences
ICASSP • Interspeech • EUSIPCO • IWAENC • WASPAA

EXPERIENCE

FRAUNHOFER IIS | SENIOR SCIENTIST & TECH LEAD
Jan 2019 - Present | Erlangen, Germany
- Product-oriented research: noise suppression, speaker activity detection, keyword spotting and audio-visual speech enhancement
- Led a team of researchers to develop ML/AI noise suppression solution for embedded devices, now part of **upHear®**.
- Noise suppression solution deployed in **Kandao Meeting Ultra**.
- 5 patent applications as lead/co-lead inventor

OHIO STATE UNIVERSITY | VISITING RESEARCHER
Oct 2017 - Dec 2017 | Columbus, Ohio, USA
- Supervisor: Prof. Deliang Wang
- Conducted research work on multi-channel speech enhancement using deep learning based time-frequency masking
- Conference publication at IWAENC 2018

INTERNATIONAL AUDIO LABORATORIES ERLANGEN |
RESEARCH & TEACHING ASSISTANT
Oct 2013 - Dec 2018 | Erlangen, Germany
- Thesis: Robust Direction-of-Arrival Estimation and Spatial Filtering in Noisy and Reverberant Environments.
- Supervisor: Prof. dr. ir. Emanuël A. P. Habets
- Tutor for Speech Enhancement course and Audio Processing Lab (both Graduate Level courses)
- 5 journal and 10 conference publications.

FRAUNHOFER IIS | RESEARCH INTERN
Apr 2013 - Oct 2013 | Erlangen, Germany
- Conducted research work on sound source localization and tracking of non-concurrent sources in reverberant and noisy environments.
- Conference publication at ICASSP 2014.

AWARDS

2017	WASPAA Conference	Best Student Paper Award
2017	WASPAA Conference	IEEE Student Travel Grant
2016	IWAENC Conference	Best Student Paper Award Finalist

SELECTED PUBLICATIONS

Full list: Google Scholar

[1] M. Elminshawi, W. Mack, **S. Chakrabarty**, and E. A. P. Habets. New insights on target speaker extraction. *arXiv preprint arXiv:2202.00733*, 2022.

[2] S. S. Shetu, **S. Chakrabarty**, and E. A. P. Habets. An empirical study of visual features for dnn based audio-visual speech enhancement in multi-talker environments. In *ICASSP*, 2021.

[3] **S. Chakrabarty** and E. A. P. Habets. Multi-speaker localization using convolutional neural network trained with noise. In *ML4Audio Worskhop at NeurIPS*, 2017.

[4] **S. Chakrabarty** and E. A. P. Habets. Time-frequency masking based online multi-channel speech enhancement with convolutional recurrent neural networks. *IEEE Journal of Selected Topics in Signal Processing*, 2019.