

EDUCATION

- **Ph.D. Computer Science** 2021 – Present
University of Sheffield *Sheffield, UK.*
 - Thesis writing phase (Submission by Jan, 2024)
 - **Research topic** Multilingual speech recognition
- **M.Sc. Electrical Engineering** 2017 – 2019
University of Engineering & Technology *Lahore, Pakistan.*
 - **CGPA:** 3.68/4.00
 - **Majors:** Computer
- **B.Sc. Electrical Engineering** 2013 – 2017
University of Engineering & Technology *Lahore, Pakistan.*
 - **CGPA:** 3.42/4.00
 - **Majors:** Computer & Electronics

SELECTED PUBLICATIONS

For full list, please visit the web page

- **MUST: A Multilingual Student-Teacher Learning Approach for Low-Resource Speech Recognition**
M. U. Farooq, R. Ahmad, T. Hain
accepted for ASRU, 2023
- **Learning Cross-lingual Mappings for Data Augmentation to Improve Low-Resource Speech Recognition**
M. U. Farooq, T. Hain
Interspeech, 2023
- **Towards Domain Generalisation in ASR with Elitist Sampling and Ensemble Knowledge Distillation**
R. Ahmad, M. A. Jalal, M. U. Farooq, A. Ollerenshaw, T. Hain
ICASSP, 2023
- **Investigating the Impact of Cross-lingual Acoustic-Phonetic Similarities on Multilingual Speech Recognition**
M. U. Farooq, T. Hain
Interspeech, 2022
- **Non-Linear Pairwise Language Mappings for Low-Resource Multilingual Acoustic Model Fusion**
M. U. Farooq, D. A. H. Narayana, T. Hain
Interspeech, 2022
- **Improving Large Vocabulary Urdu Speech Recognition System using Deep Neural Networks**
M. U. Farooq, F. Adeeba, S. Rauf, S. Hussain
Interspeech, 2019

EXPERIENCE

- **Graduate Teaching Assistant (GTA)** Sept 2022 - Present
University of Sheffield, UK. *for details, please visit Teaching web page*
 - **Department of Computer Science (DCS):** Sept, 2023 - Present
 - **Multidisciplinary Engineering Education (MEE):** Sept, 2022 - May, 2023
- **Pre-doc Intern** Sept 2020 - Dec 2020
Institute of Formal and Applied Linguistics (UFAL) *Charles University, Prague.*
 - **ELITR:** Worked on speech related components of an EU Horizon2020 project European Live Translator (ELITR)
- **Research Officer** June 2017 - August 2020
Center for Language Engineering (CLE) *KICS, UET Lahore.*
 - **Speech processing:** Developed various speech technologies for the low resource languages being spoken in Pakistan.

PROJECTS

- **Multilingual speech recognition:** Currently focusing on cross-lingual acoustic phonetic similarities
- **European Live Translator (ELITR):** Improved and maintained the speech recognition component of the system
- **Zero-shot Punjabi ASR:** Developed a Punjabi LVCSR without using target-language acoustic data
- **Enhancing Urdu LVCSR for Urdu-English code-switched speech:** Enhanced Urdu LVCSR to improve its performance for embedded English language in spontaneous Urdu speech.
- **Development of LVCSR for Urdu language:** Developed and deployed LVCSR for Urdu language
- **Speaker identification:** Compared the performance of i-vector and x-vector with various feature extraction techniques for short utterances

CONFERENCE ORGANISATION AND RELEVANT EXPERIENCE

- **UK Speech 2023:** Sheffield, UK.
IT Support Chair, Local Organising Committee UK Speech 2023
- **IEEE O-COCOSDA conference**
Member Technical Programme Committee (TPC) since 2019
- **Peer reviewer:**
 - Journal of the Acoustical Society of America (JASA)
 - Language Resources and Evaluation (LRE)
 - IEEE China Communications

WORKSHOPS & COURSES ATTENDED

- **International Spring School of Advance Language Engineering (ISSALE 2019):** Moratuwa, Sri Lanka.
A two weeks DAAD spring school with courses on *Deep Learning in NLP*, *Grammar Engineering for South Asian Languages*, *Grammar Foundations* and *Computational Linguistics*.
- **CLE Post-Graduate Certificate in Prosodic Analysis Using PRAAT (2019):** Lahore, Pakistan.
A four days course on analysing prosody, stress and intonation in Urdu language.
- **CLE Post-Graduate Certificate in Experimental Phonology Using PRAAT (2017):** Lahore, Pakistan.
A four days course on understanding Urdu phonology analysing Urdu speech waveform in PRAAT

AWARDS AND HONORS

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| • CLE Excellence Award for Research | 2018, 2019 |
| • CLE Excellence Award for Development | 2017 |

MEMBERSHIPS

- **International Speech Communication Association (ISCA)**
Student member
- **ISCA Student Advisory Committee (ISCA-SAC)**
Volunteer
- **Institute of Electrical and Electronics Engineers (IEEE)**
Student member