Indian Institute of Technology Delhi

School of Interdisciplinary Research (SIRe)

Project Proposal for Ph.D.

SIRe Project Number

2025-01-11

(will be assigned by SIRe)

Project Details	
Project Title	Music Therapy for Hindi-Speaking Aphasia Patients: Why and how does it work?
Project Summary (Minimum 500 and maximum 2000 characters)	This project explores the use of music therapy for Hindi speaking patients who have non-fluent aphasia. The human brain is known to have different circuits for processing music and language. Non-fluent aphasia generally is a result of damage to the frontal areas in the left hemisphere of the brain (also called Broca's area), which is known to be involved in expressive language. Melodic Intonation Therapy (MIT) is a promising and widely researched approach of using melody to rehabilitate patients with non-fluent aphasia. However, no variant of MIT has been developed in Hindi despite it being the world's third largest spoken language. This project aims to evaluate the applicability of Hindi adaptation of MIT for rehabilitation of patients with non-fluent aphasia. It also aims to develop suitably validated aphasia assessment tools in the Hindi language. Studies to see the impact of the language rehabilitation on the brain structure and function using EEG, fNIRS, MRI and fMRI will also be explored.

Ph.D. Supervisors

Role	Name of Faculty	Academic Unit in IITD/Institute/University	Email ID (Official)
Supervisor 1	Anoop Krishnan	Department of Civil Engineering, Yardi School of Artificial Intelligence	krishnan@iitd.ac.in
Supervisor 2	Rahul Garg	School of Information Technology, Department of Computer Science and Engineering	rahulgarg@iitd.ac.in

Project requirements (Student qualifications, experience required, etc)
***The candidate will be shortlisted based on common shortlisting criteria decided by ScRC (SIRe)**

- Bachelors in Audiology and Speech Language Pathology (BASLP) or equivalent
- Qualified in NET/JRF/GATE/COGJET Examination in a relevant discipline

Source of fellowship/funding
(CSIR/UGC/DBT/ICMR/ICAR/NEET-PG/DST-INSPIRE/IRD/FITT Project details, if any)

Candidate with his/her own fellowship/Institute funding/ Part Time

Role of Faculty Members involved:	
Supervisor-1	Melodic intonation therapy, music.
Supervisor-2	Data Analytics, fMRI, EEG and fNIRS analysis.