

Speech Processing Laboratory

About the Lab

The focus is on development of speech input/output systems for Indian languages.

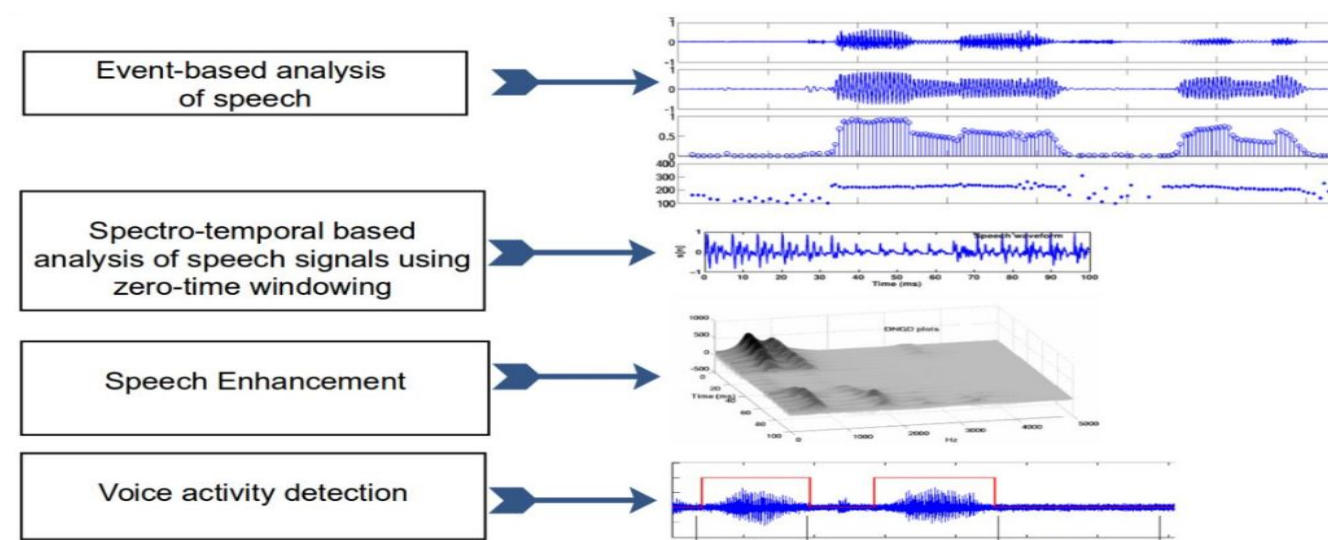
Objectives:

- Speech translation systems for Indian languages
- Multi-lingual speech recognition
- A system for secure access to information using speech mode (Biometrics)
- Content-based information storage and retrieval

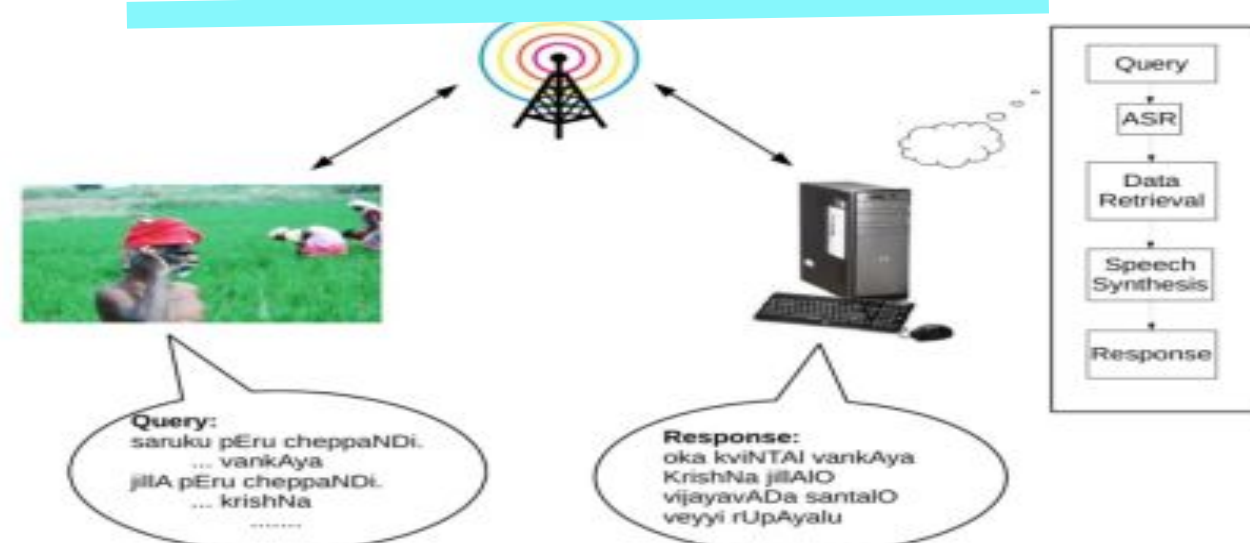
Research activities

- Event based analysis of speech
- Speech enhancement using source features
- Speech enhancement in multispeaker environment
- Development of phonetic engine for Indian languages
- Speaker segmentation and tracking
- Automatic prosody modeling and manipulation
- Speaker recognition using source features
- Information retrieval using audio and video indexing
- Speaker verification using the cues from speech
- Person authentication using biometrics
- Application of neural networks

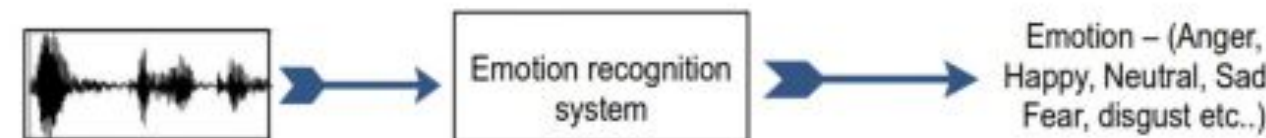
Speech Signal Processing



End to End Dialog Systems

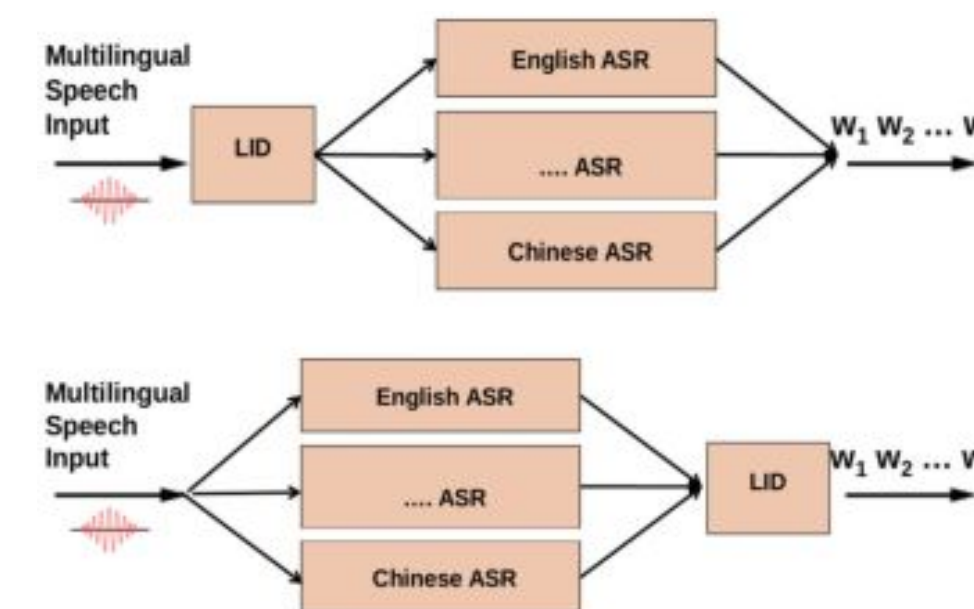


Emotion Recognition

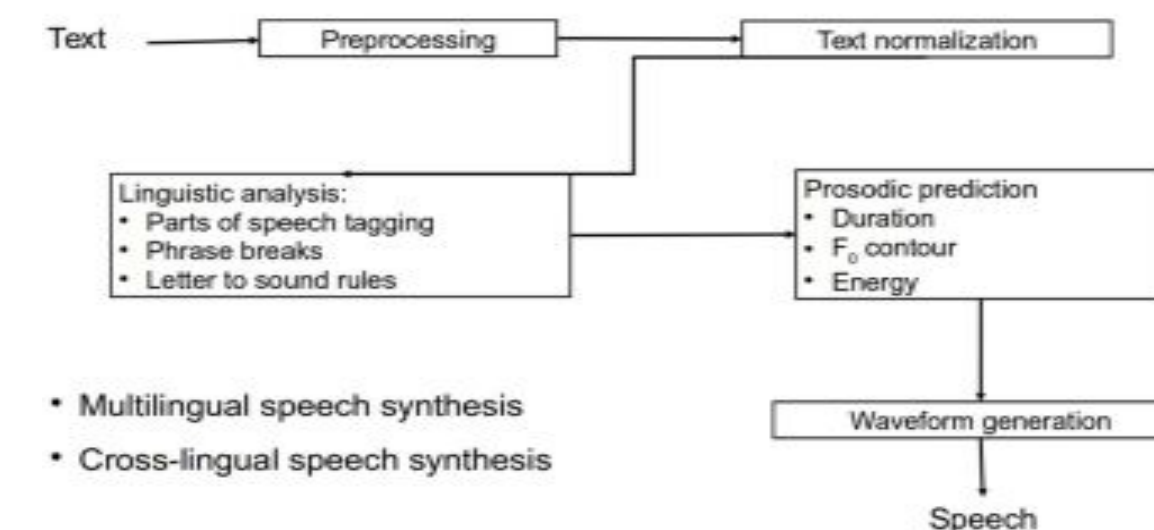


- Real-time processing of speech features
- Excitation based features

Multi Lingual ASR

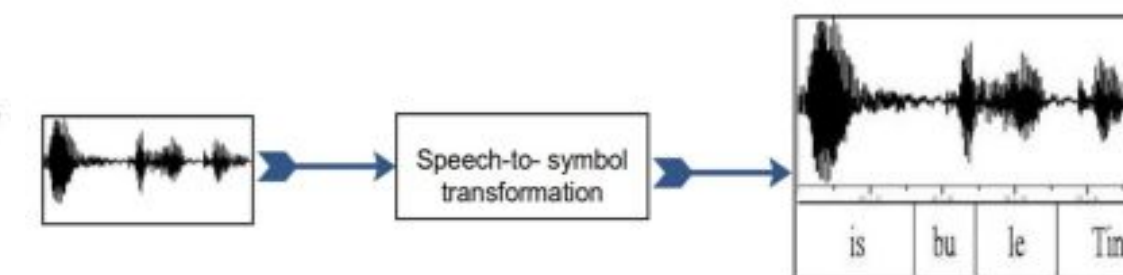


Speech Synthesis



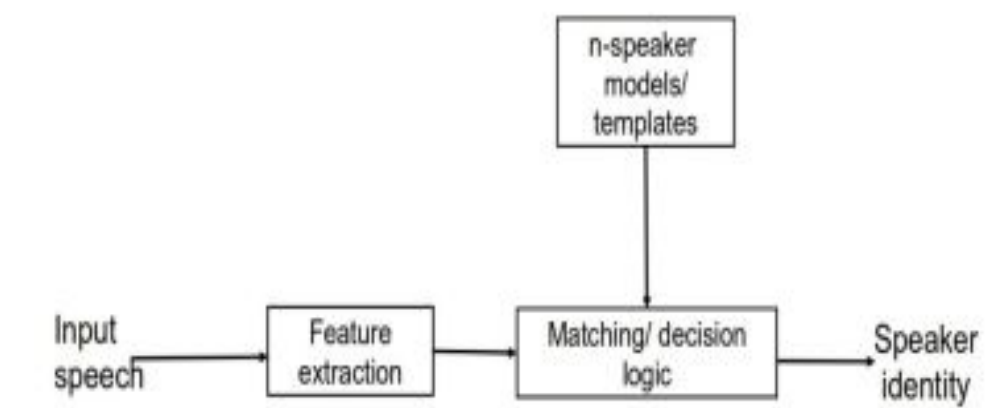
- Multilingual speech synthesis
- Cross-lingual speech synthesis

Phonetic Engine



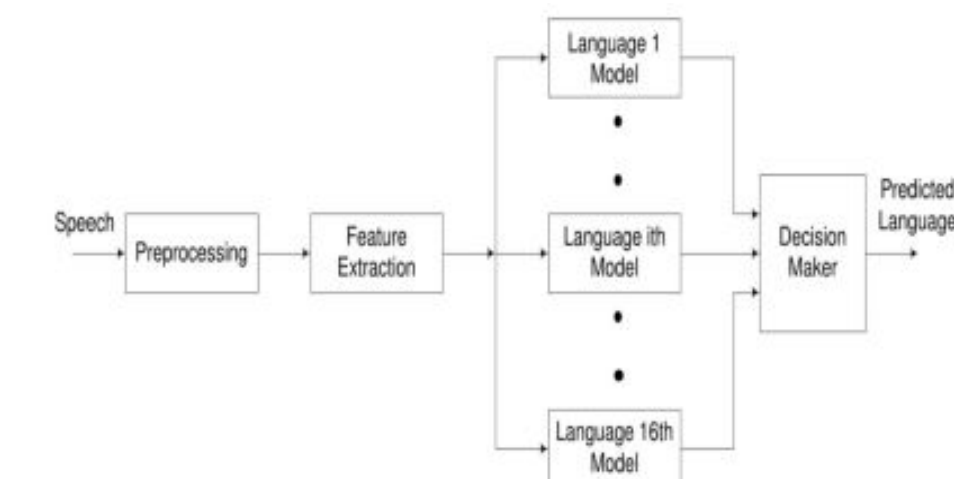
- Language independent
- Use of prosodic and temporal features

Voice Biometrics



- Multi-modal voice biometrics

Language Identification



Other Details

Publications: 2012-2020
Journals- 24+
Conference papers- 76+
Lab Members
Faculty:03
PhD:25
MS: 18