

Sai Krishna Rallabandi

Technical Resume

Publications related to Speech Technology

Journals

- IJDL **Speaker Anonymization as a privacy preserving mechanism in oral personal histories.**
Padmini Bandi, SAI KRISHNA RALLABANDI, Rajendran and Suryakanth V Gangashetty
- EURASIP **Developing a unit selection voice given audio without corresponding text,**
Journal on *submitted manuscript.*
Audio Speech Tejas Godambe, SAI KRISHNA RALLABANDI, Suryakanth V Gangashetty, Ashraf Alkhairy
and Music and Afshan Jafri
Processing

Conference Papers

- ASRU 2015 **Learning Continuous Representation of Text for Phone Duration Modeling in Statistical Parametric Speech Synthesis.**
SAI KRISHNA RALLABANDI, Sirisha Rallabandi, Padmini Bandi and Suryakanth V Gangashetty
- Interspeech 2015 **IIIT-H's entry to Blizzard Challenge 2015.**
SAI KRISHNA RALLABANDI, Anandaswarup Vadapalli, Sivanand Achanta and Suryakanth V Gangashetty
- Interspeech 2015 **Blizzard Challenge 2015.**
Kishore Prahallad, Anandaswarup Vadapalli, SAI KRISHNA RALLABANDI, Santosh Kesiraju, Hema Murthy, Nagarajan, Bira Singh, Sajini, K Sreenivasa Rao, Suryakanth V Gangashetty, Simon King, Keiichi Tokuda, and Alan W. Black.
- MLSLP 2015 **Positive Point-wise Mutual Information based Factorization approach for modeling phone duration in Statistical Parametric Speech Synthesis.**
SAI KRISHNA RALLABANDI, Sirisha Rallabandi and Suryakanth V Gangashetty
- CSUN 2015 **Audio Rendering of Mathematical Content.**
Venkatesh Potluri, SAI KRISHNA RALLABANDI, Priyanka Srivastava and Kishore Prahallad
- ICON 2014 **Significance of Paralinguistic Cues in the Synthesis of Mathematical Equations.**
Venkatesh Potluri, SAI KRISHNA RALLABANDI, Priyanka Srivastava and Kishore Prahallad
- arXiv 2015 **Significance of Maximum Spectral Amplitude in Sub-bands for Spectrum Envelope Estimation and Its Application to Statistical Parametric Speech Synthesis.**
Sivanand Achanta, Anandaswarup Vadapalli, SAI KRISHNA RALLABANDI and Suryakanth V Gangashetty

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Other Publications

Natural Language Processing

ICOLSI 2015 **A Framework for Humor Recognition from Social Media using Word Embeddings** .

SAI KRISHNA RALLABANDI, Ayushi Pandey, Brij Mohan Lal Srivastava and Suryakanth V Gangashetty

Human Computer Interaction

XRCI 2015 **Fingersnap based Biometric Authentication.**

SAI KRISHNA RALLABANDI, Priyanka Veermaosu, and Kishore Prahallad

Research Projects

Forced Alignment in 7 European languages, GSoC 2015.

This project aims at developing reliable transcriptions on a broadcast news corpus in 7 European languages.

Link to the proposal here <https://goo.gl/5x8pfH>

Privacy in Oral Personal History, IIIT-HYD.

This project aims at collecting the spoken data about their lives from people from different background and analysing various aspects from the collected data. The projections include voice conversion, synthesis, embedding emotions and prosody into the synthesized voices, etc

Text to Speech on Mobile platform, IIIT-HYD.

This project aims at developing Text to Speech systems in 13 Indian languages on Android platform.

Whisper to Normal Speech Conversion, IIIT-Hyd.

This project aims at converting the whisper speech into normal speech by identifying the unvoiced segments and then mapping the fundamental frequency(F0).

Finger Snap Biometric Authentication, IIIT-Hyd.

Finger snapping sound follows a distinct pattern and is a very prominent single frequency dominated signal, although some harmonics might occur. The dominant frequency can therefore be used to design the model to identify the person based on it. We investigate the methods to differentiate the users based on their snapping pattern so that they can be used as authentication mechanisms.

Whistle Based Biometric Authentication, IIIT-Hyd.

This project aims to investigate the methods to differentiate the users based on their whistling pattern so that they can be used as authentication mechanisms. Recognition of the speaker based on the frequency contour was performed with over 90 percent accuracy using the contour similarity approaches for 20 individuals.

Duration Modeling to Increase the Intelligibility of Text to Speech Systems, IIIT-Hyd.

This project aims at modelling the durations of the individual phones in Indian languages on a context dependent framework to enhance the intelligibility and the naturalness of the synthesized speech.

Analysis on the effect of Blood Pressure Speech segments, IIIT-Hyd.

In this work, we examine the variations caused in the speech parameters due to the changes in the blood pressure and try to quantify them using Regression modelling.

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Automatic Recogniton of Emotions, NRIIT,Guntur.

Automatic Emotion Recognition is the mechanism in which the machine or the robot or the computer is able to recognise the emotions of the person based on the instincts. This project mainly is concentrated via the speech instincts, as speech is the most natural form of communication as far as the humans are concerned.

Analysis on Speech segments, IIIT-Hyd.

In this work, we experiment with the different kinds of filler phrases such as verbal and non verbal fillers, currencies, abbreviations, etc present in the speech and analyses the importance of the same in spontaneous speech.

Data Collection in Oral Personal History, IIIT-Hyd.

This project aims at collecting the spoken data about their lives from people from different background and analysing various aspects from the collected data. The projections include voice conversion, synthesis, embedding emotions and prosody into the synthesized voices, etc

Miscellaneous Projects

Object Detection from Image, MICROSOFT HACKATHON 2015.

Participated and created a windows phone application which recognises the object on which the camera of the phone is focussed. The process has two stages: Training and Testing. In this project, we've used convolutional neural networks to train the models using imagenet data.

Low Vision Aid Apps, MIT MEDIA LAB WORKSHOP 2014.

Participated and created an android app for low vision people which enhances the contrast and magnifies the live camera feed. It also identifies the color of the obstacle. The information about the obstacle distance and its height are rendered to the user using TTS system. It also identifies obstacle free path.

Pronunciation Checker, MICROSOFT HACKATHON 2014.

Participated and created a windows phone application which trains the user on his accent. The app has three accents: US,UK and Australian. In this project, the correct pronunciation of the word was taken as reference and then compared with input using DTW (Dynamic Time Warping) algorithm, VQ (Vector Quantization) codebook approach

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