Speech Signal Processing (Monsoon 2022)
Course calendar
Faculty: Dr. Anil Kumar Vuppala

Lecture	Date	Topic	Assignments	Instructor
1	30 July	**Motivation:** (Introduction and overview of speech signal processing course, Marks distribution and grading policy)		**Dr. Anil**
2	**03 Aug**	**Tutorial**		
3	06 Aug	**Speech Production & Perception:** Speech production chain; Articulatory Signatures: MOA, POA;	**A - 1**	**Dr. Anil**
4	10 Aug	Types of speech LTI Model of speech production		**Dr. Anil**
5	13 Aug	**Types of Speech Analysis**		**Dr. Anil**
6	17 Aug	Voiced and Unvoiced detection of speech	**A - 2**	**Dr. Anil**
7	20 Aug	Pitch, Formants, Pitch Detection		**Dr. Anil**
8	24 Aug	Short Time Fourier Transform analysis & Applications	**Quiz - I**	**Dr. Anil**
9	03 Sep			**Dr. Anil**
10	07 Sep	Cepstral Analysis, MFCC		**Dr. Anil**
11	10 Sep	Vowel Region detection & its applications (Speaking rate estimation)	**A-3**	**Dr. Anil**
12	14 Sep	Speaker Recognition (Overview)		**Dr. Anil**
13	17 Sep	Speaker recognition demo	**MID**	**Dr. Anil**

14	24 Sep	Epoch and excitation analysis	A-4	Dr. Anil
15	28 Sep	Prosody analysis		Dr. Anil
16	**01 Oct**	Speech enhancement		**Dr. Anil**
17	08 Oct	ML models for Speech		**Dr. Anil**
18	12 Oct	**Projects discussion**		
19	15 Oct	ASR -1		**Dr. Anil**
20	22 Oct	**ASR-2**		**Ganesh**
21	26 Oct	MID project evaluations (online)		**Online**
22	02 Nov	ASR using Kaldi		**Dr. Anil and Ganesh**
23	05 Nov	ASR latest trends		**Ganesh**
24	09 Nov	SSMT		**Dr. Anil**
25	12 Nov	Project presentations-1		**Dr. Anil**
26	16 Nov	Project presentations-2		**Dr. Anil**

Grading :

Quiz I   10%
Assignments   20%
Mid   20%
Project   25% (10 for MID project and 15 for end project)
End Exam   25%