



Indian Institute of Technology Patna Department of Electrical Engineering



Online Short Term Course (STC)
On

**Deep Learning-Based Speech Processing
Techniques for Smart Health and Education
Systems-Concepts, Recent Trends and Key
Challenges**

(September 20-24, 2021)

Conveners/ Coordinators:

Dr. Udit Satija, EED, IIT Patna

Dr. Saurabh Kumar Pandey, EED, IIT Patna

Course Description:

In the last few years, speech recognition and deep learning technologies have gained immense popularity in the research community. Starting from healthcare to domestic to artificial intelligence, the intervention and dependence on speech recognition digital assistants have increased manifold times. Speech recognition technology and the use of digital assistants have moved quickly from our cell-phones to our homes, and its application in industries such as business, banking, marketing, and healthcare is quickly becoming apparent and experienced a huge leap in the last few years.

Course Objectives:

The course content is designed for participants to motivate them to learn about deep learning based speech processing techniques for smart health and education systems. The course will uncover following contents:

- ❖ Physiological Sounds Analysis Techniques for Edge Health Computing Systems
- ❖ Speech and Spoken-language centric Machine Intelligence
- ❖ Advancement in Deep learning-based speech processing
- ❖ Deep Learning Based Speech Signal Quality Assessment Methods for Unsupervised Speech Analysis Systems
- ❖ Dysarthric Speech Processing
- ❖ Detection of Vocal Folds' Disorders using EGG signals
- ❖ Deep Learning for Speech Based Health and Educational Systems
- ❖ Deep Learning for Speech Enhancement and Recognition

Target Audience:

The course is suitable for fresher's (UG/PG including Ph.D. students), Scientists in R&D organizations, Faculty Members, and, technical professionals interested in this domain.

Important Dates:

Course dates: September 20-24, 2021

Last date of Registration & Payment: 17th September 2021

Confirmation and Invitation link : 19th September 2021

Resource Persons:

- Prof. B Yegnanarayana, Distinguished Professor, IIT Hyderabad, Adjunct Faculty, IIT Tirupati, IIIT Hyderabad.
- Prof. K. Sreenivasa Rao, Professor, IIT Kharagpur.
- Prof. Samarendra Dandapat, Professor, IIT Guwahati.
- Prof. Shrikanth Narayanan, Niki & Max Nikias Chair in Engineering, Professor of ECE, CS, University of Southern California.
- Prof. Björn Schuller, Professor of AI, Imperial College London.
- Prof. S R Mahadeva Prasanna, Professor, IIT Dharwad, Karnataka.
- Dr. Prasanta Kumar Ghosh, Associate Professor, Department of Electrical Engineering, Indian Institute of Science, Bangalore.
- Dr. K. Sri Rama Murty, Associate Professor, Department of Electrical Engineering, Indian Institute of Technology Hyderabad.
- Dr. M. S. Manikandan, Assistant Professor, IIT Bhubaneswar.
- Dr. Udit Satija, Assistant Professor, IIT Patna.

Registration:

A participation fee of Rs. 1000/750/500 + 18% GST is applicable for the Indian participants (faculty & others / research scholars / PG/UG students). For international participants, a fee of USD 50 + 18% GST will be applicable.

Payment Details:

Bank Name : State Bank of India
Account Holder Name : IIT Patna Vishlesan I-Hub Foundation
Account Number : 39579970437
IFSC Code : SBIN0017164
Branch Name : IIT Bihta

After payment, register at following link with transaction details:

<https://forms.gle/wJBUX1aqGQELtmAd7>

For any query please contact:

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