National Institute of Technology Rourkela

Departmental Seminar

Seminar Title	: Channel Estimation for Intelligent Reflecting Surfaces for MISO-OFDM System by Deep Learning.
Speaker	: Subhra Jyoti Sahu.
Supervisor	: Prof Poonam Singh.
Venue	: EC303, Seminar Room
Date and Time	: 29 May 2025 (11.00AM)
Abstract	: The Intelligent reflecting surface (IRS) framework improves next-generation wireless communication systems by using affordable passive components. Because long short term memory (LSTM) models can learn temporal correlations and extract features from sequential data, they are very effective at solving channel estimation (CE) problems. This work applies the LSTM model to CE in downlink orthogonal frequency division multiplexing (OFDM) systems with IRS-assisted multiple-input single-output (MISO). The deep neural network (DNN) optimization technique is used to train the LSTM model, and comparison is done using available DNN optimizers. The CE performance is assessed using various optimizers under different cyclic prefix lengths. For IRS assisted communication systems, simulation findings validate the LSTM model's capacity to learn efficiently and offer accurate channel estimation.