National Institute of Technology Rourkela

Departmental Seminar

Seminar Title	: Deep Learning Based Enhanced Approximate Message Passing for mmWave Massive MIMO Channel Estimation.
Speaker	: Anusaya Swain
Supervisor	: Prof S M Hiremath
Venue	: EC303, Seminar Room
Date and Time	: 06 Mar 2025 (11.00AM)
Abstract	: This paper presents a new approach to channel estimation in millimeter-wave beamspace massive MIMO systems. The proposed method is an approximate message passing algorithm that utilizes a flexible discriminative denoiser. The denoiser consists of two parts: a noise level map identifier and a convolutional neural network. By learning the channel structure and estimating the noise characteristics, the denoiser enhances the performance of the message passing algorithm. Simulation results demonstrate that the proposed network outperforms networks using DnCNN denoisers and existing compressed sensing-based algorithms.