## National Institute of Technology Rourkela

## Registration Seminar

Seminar Title : Improved Online Domain Adaptation using Decoupled KL Divergence Loss.

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Supervisor : Upendra Kumar Sahoo

Venue : EC 303(Seminar Hall), ECE Department

Date and Time : 10 Sep 2025 (05.15PM)

Abstract : Object detection finds extensive application in the modern problem like surveillance,

autonomous vehicle, smart city application etc. In object detection, the objective is to find the position and category of the object. For object detection deep learningbased techniques like faster RCNN, YOLO series and SSD are developed. However, it suffers from the domain shift problem. If the distribution between the source and target domain data differs the performance of the algorithm degrades severely. To circumvent this problem different domain adaptation technique are proposed. Among these the source free domain adaptation (SFDA) is very practical in nature which is based on the learned model trained with the source data and during the test of the target data the source data is not available only the trained network is available. Among this online domain adaptation-based which is a subset of SFDA based object detection is very practical in nature. In this technique directly the target data is used

in an online manner for domain adaptation.