



विज्ञान और प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



NATIONAL MISSION ON
INTERDISCIPLINARY CYBER-PHYSICAL
SYSTEMS (NM-ICPS)

Quarterly Bulletin
July-Sep 2025



**NATIONAL MISSION
ON
INTERDISCIPLINARY
CYBER-PHYSICAL
SYSTEMS**

www.nmicps.gov.in

www.dst.gov.in

IHUB Drishti Foundation, IIT Jodhpur

Computer Vision, Augmented and Virtual Reality (AR&VR)

Hub Overview

The TIH on Computer Vision, Augmented and Virtual Reality, named as iHub Drishti Foundation focuses on the core research areas of Seeing and Sensing, Dependability, Real-time Computer Vision Systems, and Data Collection, Curation, and Annotation. iHub Drishti has identified the following application areas for developing technologies: Computer Vision for Autonomous Systems; Computer Vision for Better Living: Healthcare and Biosphere; Imaging for Document Analysis; CV and VR for Industry 4.0; Dependable AR-VR for X (including games).

Project Updates

Project TrustMe is designed to detect and identify the sources of adversarial attacks on AI object recognition models. It features an Explainable Adversarial Attack Detection and Mitigation system for object recognition algorithms, currently at Technology Readiness Level (TRL) 6. The system can effectively differentiate between intentional, malicious manipulations and natural, unintentional image noise. Operating as a "black-box" detector, it learns overall data patterns rather than relying on specific image labels, making it highly adaptable and well-suited for applications such as face recognition.

Real-time 3D scene reconstruction and localization for Autonomous Ground Vehicles (AGVs) in unknown or harsh environments are being enabled in the project (TRL 3) focused on this area. Neural Distance Fields (NDF) are used to improve upon neural field learning, achieving a more reliable 3D reconstruction from sequences of 3D LiDAR scans.

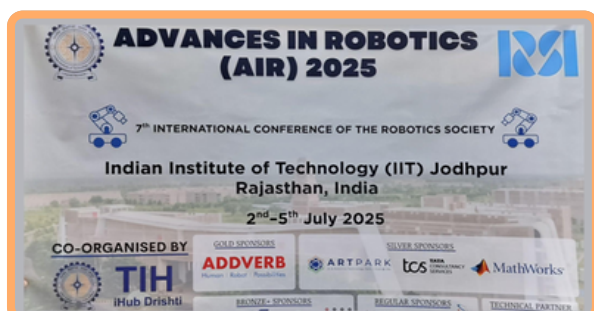
Collaborations

A MoU with SMC Corporation India Pvt. Ltd. to establish the Centre of Excellence in Industry 4.0 Technologies was signed by iHub Drishti Foundation in September 2025.



Outreach Initiatives

The Advances in Robotics Conference at IIT Jodhpur in July 2025 was co-organized by iHub Drishti Foundation.





विज्ञान और प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



**NATIONAL MISSION ON
INTERDISCIPLINARY CYBER-PHYSICAL
SYSTEMS (NM-ICPS)**

**Department of Science & Technology
Ministry of Science & Technology
Government of India**