SPARC
Scheme for Promotion of Academic and Research Collaboration

शिक्षा मंत्रालय
MINISTRY OF EDUCATION
सत्यमेव जयते

A Workshop on ISAC for Defence and Space 4th February 2026

A one-day engaging workshop on Integrated Sensing and Communication for defence and space domains

1872 PRIFYSGOL ABERYSTWYTH UNIVERSITY

Workshop Overview

You are invited to attend a one-day engaging workshop on the pertinent and timely topic of Integrated Sensing and Communication (ISAC) for defence and space domains. The workshop will highlight how joint communication sensing concepts can support air and ground defence, space domain awareness, satellite connectivity, and secure mission operations using shared RF infrastructure.

The ISAC for Defence and Space workshop is ideal for:

- Defence and security professionals (armed forces, MoD, defence SMEs) who need to understand how ISAC can enhance surveillance, situational awareness, air and maritime picture compilation, and mission planning in complex environments on the ground and in near-space.
- Space and satellite operators, space situational awareness (SSA/SDA) teams, and agencies working with LEO/MEO/GEO systems who are interested in how ISAC concepts can support object tracking, interference monitoring, and secure SATCOM.
- Peacekeeping, civil protection, and public safety agencies interested in non-lethal sensing for borders, critical infrastructure, urban security, disaster response, and smart mobility corridors using terrestrial and satellite-linked networks.
- R&D engineers and system architects in telecoms, defence, and space industries exploring how 5G/6G and satellite infrastructure can double as a sensing layer for UAVs, vehicles, ships, and objects in orbit.

Policymakers, programme managers, and strategists who must evaluate technology roadmaps, investment decisions, dual-use opportunities, and ethical/regulatory issues around ISAC deployment in defence and space operations.

Benefits of the program

- Gain a clear conceptual map of ISAC/JCAS, seeing how communication and sensing can be co-designed and what this means for defence and space capabilities, resilience, coverage, and cost.
- Understand concrete use cases such as UAV tracking, cross-road and coastal safety monitoring, border and perimeter protection, occupancy and through-wall activity detection, as well as space use-cases like space debris tracking and satellite interference monitoring.
- Hear practical lessons from defence SMEs, academic projects, and emerging 5G/6G and satellite-enabled trials, including what actually works outside the lab, where terrestrial and space systems complement each other, and what remains at research stage.
- Use the plenary discussion session to test their own scenarios and constraints (e.g. base, border, or orbital use-cases) against the group's expertise, building collaboration leads and identifying potential joint projects.
- Leave with a strategic view of timelines, standards, and risks (3GPP, 6G, space-ISAC discussions) so they can brief their organisations, shape requirements, and justify future R&D or acquisition decisions in both defence and space programmes.

Course Coordinator

Prof. Vimal Bhatia,
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Scan QR Code to Register

Registration Fees (incl GST):
Students of IIT Indore : Free
Students outside IITI : ₹ 2,000/-
Faculties and Industrial personnel outside IITI : ₹ 4,000/-
Last date for registration is 2nd February 2026 and acceptance are on first-come-first basis.

Keynote Speakers

Dr. Amit K. Mishra, Director, NSC, Aberystwyth University, UK

Dr. Kuntal Deka, IIT Guwahati, India

Prof. Zafar Ali Khan IIT Hyderabad, India

Registration link
Register at: https://forms.gle/agUenmtxE8jGPx1J9 or scan QR code.
For more information, please contact at: vbhatia@iiti.ac.in
Website: https://sites.google.com/view/signalsoftware/sasg/

One Day Workshop
on
Integrated Sensing and Communication for Defence and Space

Date : 4th February 2026
Venue : POD 1A 319 EE Seminar Hall, IIT Indore or Online

Program Schedule

Timing	Activity
9:30 - 9:45	**Opening**
9:45 - 10:15	**Welcome Talk** *Dean R&D, IIT Indore*
10:15 - 10:30	☕ **Coffee Break**
10:30 - 11:15	**ISAC: Standards in Telecommunication (5G/6G & SATCOM)** *Prof. Kuntal Deka, IIT Guwahati*
11:15 - 12:00	**A Review of ISAC in Defence & Space** *Prof. Amit K Mishra*
12:00 - 12:45	**Emerging Applications of ISAC in Defence & Space** *Prof. Zafar Ali Khan, IIT Hyderabad*
12:45 - 13-45	🍽️ **Lunch Break**
13:45 - 14:45	**Panel / Plenary Discussion** *"ISAC for Defence and Space: From Concepts to Capability"*
14:45 - 15:15	☕ **Coffee Break**
15:15 - 15:30	**Closing Remarks & Next Steps**

Key Features

- Hybrid format: In-person + live virtual attendance for wider participation across defence and space stakeholders.
- Expert talks: Focused sessions on standards, defence use-cases, and space domain applications.
- Plenary discussion session: Extended, facilitated forum on challenges, opportunities, and collaboration across defence, space, and telecom sectors.
- Panel discussions: Defence SME, academic experts, military technologists, and (where possible) space/SSA representatives.
- Registration Fees: To be confirmed (with options for in-person and virtual, plus discounts for students and groups).
- Capacity: 80 in-person, 200 virtual to keep discussions interactive while allowing broad engagement.