



Centre for Joint Warfare Studies

# SURVEILLANCE & ELECTRO-OPTICS INDIA 2024

Manekshaw Centre, New Delhi

INDIAN MILITARY REVIEW  
**IMR**

22 March 2024  
Seminar & Expo

## Night Vision (Thermal & IR)



## Aerial systems



## Ground systems



## Space-based EO sensors



## Underwater systems



## Aerial surveillance



### Hand-held Devices

- Infrared (IR) cameras
- Laser rangefinders
- Night vision goggles
- Thermal imaging cameras
- Heads-up displays (HUDs)
- Infrared aiming lasers

### Ground Surveillance Systems:

- Early Warning Radar, Ground Surveillance Radar.
- Thermal Cameras, Infrared Sensors, Acoustic Sensors.
- Surveillance Vans, Mobile Radar Units.
- Perimeter intrusion detection systems
- Security cameras
- Motion sensors

- Access control systems

### Space Surveillance Systems:

- Imaging, Communications Satellites
- Electronic Intelligence Satellites.
- Optical Space Telescopes, Radio Space Telescopes.
- Satellite-based Infrared Sensors, Radio Frequency Sensors.

### Aerial Surveillance Systems:

- Electro-optical cameras
- Laser designators
- Synthetic aperture radar (SAR)
- Electro-optical/infrared (EO/IR) sensors
- Synthetic aperture radar (SAR)
- Electronic intelligence (ELINT) sensors

- Communications intelligence (COMINT) sensors

- Aerial imagery
- Thermal imaging cameras
- Light Detection and Ranging (LiDAR)
- Multispectral Camera

### Underwater Surveillance Systems:

- Remotely Operated Underwater Vehicles (ROVs)
- Autonomous Underwater Vehicles
- Active Sonar, Passive Sonar.
- Segmented cylinder transducers
- Low-frequency Tonpilz transducers
- Electro-optical cameras underwater imaging
- Underwater spectrophotometry

# 14th Edition - Longest Running Surveillance & E-O Event

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The rapidly evolving landscape of military surveillance and electro-optics demands a collaborative platform where armed forces, defense industry professionals, and researchers can converge to explore the latest advancements, share insights, and foster innovation. To focus on this need, the event will include Terrestrial, Aerial and Space-based, Maritime and Underwater Surveillance, and Research & Development within the realm of military surveillance and electro-optics.

### Objectives

The primary objectives of the seminar are to:

- (a) **Review Latest Advancements.** Provide a detailed overview of the cutting-edge technologies and innovations in the field of military surveillance and electro-optics.
- (b) **Facilitate Collaboration.** Bring together armed forces and the defense industry to facilitate meaningful discussions, enabling them to better understand each other's requirements and capabilities.
- (c) **Knowledge Exchange.** Foster a platform for knowledge exchange, where participants can share experiences, best practices, and lessons learned.
- (d) **Research & Development Showcase.** Highlight the latest developments in research and development, encouraging collaboration between academic institutions, research organizations, and industry players.

### Seminar Structure

The seminar will be organized into four key segments, each focusing on a specific aspect of military surveillance and electro-optics.

- (a) **Terrestrial Surveillance.** To include:
  - (i) Advances in Ground-Based Radar Systems.
  - (ii) Unmanned Ground Vehicles for Surveillance.
  - (iii) Night Vision Technologies for Land Forces.
  - (iv) Sensor Integration and Data Fusion on the Battlefield.
- (b) **Aerial and Space-Based Surveillance.** To include:
  - (i) Satellite-based Earth Observation Systems.
  - (ii) High-Altitude Long-Endurance (HALE)

Knowledge Partner



Unmanned Aerial Vehicles.

(iii) Advancements in Airborne Reconnaissance Systems.

(iii) Space-based Imaging Technologies for Military Applications.

(c) **Maritime and Underwater Surveillance.** To include:

(i) Underwater Drones and Autonomous Submersibles.

(ii) Naval Surveillance Radar Systems.

(iii) Satellite-based Maritime Domain Awareness.

(iv) Sonar Technologies for Submarine Detection.

(d) **Research & Development.** To include:

(i) Emerging Technologies in Electro-optics.

(ii) Artificial Intelligence and Machine Learning in Surveillance.

(iii) Materials Innovation for Stealth Technologies.

(iv) Quantum Technologies in Military Surveillance.

### Expected Outcomes

- (a) **Enhanced Collaboration.** Forge new partnerships and strengthen existing collaborations between armed forces and the defense industry.
- (b) **Informed Decision-Making.** Equip participants with the knowledge needed to make informed decisions regarding procurement, strategy, and technology adoption.
- (c) **Networking Opportunities.** Provide a platform for networking, allowing participants to connect with experts, researchers, and industry leaders in the field.
- (d) **Future Roadmap.** Contribute to the development of a shared vision and roadmap for the future of military surveillance and electro-optics.

The seminar on Military Surveillance & Electro-optics aims to be a catalyst for progress in the field, fostering collaboration and innovation among key stakeholders. By bringing together the armed forces, defence industry, and research community, the event will contribute to the advancement of technologies that play a critical role in ensuring the conduct of successful operations.

# SEMINAR PROGRAMME

**Friday, 22 March 2024**

## SESSION 1 – INAUGURAL SESSION (0930 – 1045 hrs)

Welcome Address	Director, Centre for Joint Warfare Studies
Inaugural Address	<b>Gen Anil Chauhan</b> , PVSM, UYSM, AVSM, SM, VSM, Chief of Defence Staff
Keynote Address	<b>Air Mshl Surat Singh</b> , AVSM, VM, VSM, Director General Air Ops, Air HQ.
Special Address	<b>Dr BK Das</b> , OS & DG Electronics & Communication (ECS), DRDO
Industry Perspective	<b>Col KV Kuber</b> , Director Defence & Aerospace, Ernst & Young.
Release of Report	EY-IMR Knowledge Paper on Surveillance & Electro-optic Devices
1045 – 1115 hrs	Refreshments & exhibition.

## SESSION 2 – TERRESTRIAL SURVEILLANCE (1115 – 1315 hrs)

Chairperson: <b>Addl DG Information Systems, Army HQ.</b>	
1115 – 1130 hrs	Introduction and Opening Remarks by the Chairman.
1130 – 1145 hrs	Surveillance of the Battlefield and present status of Project Sanjay. <b>Brig Ops, Artillery Directorate, Army HQ.</b>
1145 – 1200 hrs	Challenges in Border Surveillance at Night. <b>IG (Ops) Border Security Force.</b>
1200 – 1215 hrs	Intelligence Gathering with EO Sensors for Today's Missions. <b>Speaker from ECE, DRDO.</b>
1215 – 1230 hrs	Latest developments in tracking threats and C&R for Air Defence. <b>Col Sameer Babu, Colonel (C&amp;R), Army AD Directorate, Army HQ.</b>
1230 – 1245 hrs	Industry presentation.
1245 – 1300 hrs	Industry presentation.
1300 – 1315 hrs	Q&A/ Discussion.
1315 – 1415 hrs	Lunch & exhibition

## SESSION 3 – AERIAL AND SPACE BASED SURVEILLANCE (1415 – 1615 hrs)

Chairperson: <b>Air Vice Mshl Rajiva Ranjan, ACAS Ops (Space), Air HQ</b>	
1415 – 1430 hrs	Introduction and Opening Remarks by the Chairman.
1430 – 1445 hrs	UAV sensor payloads for persistent surveillance. <b>Speaker from Army Aviation Directorate.</b>
1445 – 1500 hrs	Space-based ISR for early warning. <b>Speaker from Defence Space Agency</b>
1500 – 1515 hrs	Latest developments and requirements for Tactical Recce (EO, SAR, IR Search). <b>Speaker from DG Ops Air, Air HQ.</b>
1515 – 1530 hrs	Need to augment airborne surveillance (AEWS). <b>Speaker from DG Ops Air, Air HQ.</b>
1530 – 1545 hrs	Industry presentation.
1545 – 1600 hrs	Industry presentation.
1600 – 1615 hrs	Q&A/ Discussion.

## SESSION 4 – MARITIME SURVEILLANCE, RESEARCH & DEVELOPMENT (1615 – 1730 hrs)

Chairperson: <b>Cmde Randeep Singh Randhawa, Director Naval Ops, Naval HQ</b>	
1615 – 1630 hrs	Introduction and Opening Remarks by the Chairman.
1630 – 1645 hrs	surveillance against aerial, surface and underwater threats. <b>Speaker from Indian Coast Guard.</b>
1645 – 1700 hrs	Integrated employment of P8I, MQ9 and MH-60R for maritime surveillance. <b>Speaker from ACNS (Air), Naval HQ.</b>
1700 – 1715 hrs	Making soldiers invisible. <b>Speaker from IIT-Bombay.</b>
1715 – 1725 hrs	Closing Address. <b>Lt Gen Sunil Srivastava</b> , AVSM, VSM**, Retd, Director, CENJOWS
1725 – 1730 hrs	Vote of Thanks. <b>Maj Gen Ravi Arora</b> , Retd, Chief Editor Indian Military Review.
1730 hrs	Refreshments and close.

# Rate Card

## DELEGATE PASS

VALID FOR FULL DAY INCLUDES LUNCH

### Rs 5,900

Delegate Pass Price includes:

1. Attending all sessions
2. Visit exhibition booths.
3. Interacting with sponsors, exhibitors, speakers & delegates
4. All refreshments and lunch
5. Video link of proceedings after the event.

Transferable and refundable if cancelled 48 hrs before the event.

## ECO STARTUP

### EXHIBITION BOOTH

LOW COST FEATURE RICH

### Rs 118,000

1. One furnished octonorm exhibition booth 2X2M.
2. Company profile 200 words with Logo, contact details in event guide.
3. Half page advt in show guide
4. Two delegate passes
5. Contact data of all delegates and video links after the event.
6. Fascia, logo, 1 table, 2 chairs, carpet, 2 lights, power box, dustbin at booth

## PREMIUM BOOTH

FOR MORE FOOTFALLS

### Rs 236,000

1. One furnished octonorm exhibition booth 3X3M.
2. Company profile 300 words with Logo, contact details in event guide
3. Half-page advt in Event Guide
4. Three Delegate Passes and three Exhibitor passes
5. Contact data of all delegates and video links after the event.
6. Company Logo at Venue, Lobby and on Stage as Sponsor
7. Distribute one Company literature item in Delegate Bags
8. Fascia, logo, 1 table, 4 chairs, carpet, 3 lights, power box, dustbin at booth.

### ADDITIONAL BRANDING OPPORTUNITIES

- Delegate Lanyards (non-exclusive) with Company Logo both sides Rs 118,000
- Registration Sponsor with Company Logos at all counters Rs 118,000
- Luch Sponsorship with Banner Rs 94,400
- Standee banner (3x6ft) at Entrance, each Rs 10,000
- Banner (8x10ft) at Entrance, each Rs 25,000

## BRONZE SPONSOR

MULTIPLE BENEFITS WITH SPEAKING AND BRANDING

### Rs 354,000

1. Speaking Slot 15 mins
2. 3x3m furnished octonorm booth
3. Five Delegate Passes and three Exhibition staff Passes
4. Full Page Advt in Event Guide
5. Company Profile (500 words with logo, contact details) in Event Guide
6. Two company literature items/gift in Delegate Bags
7. Delegate List with contact details after the event.
8. Video of speakers' presentations after the event
9. Sponsor Logo on event promotion
10. Logo on all marketing materials
11. Banner on Event website
12. Company Logo at Venue, Lobby and on Stage as Sponsor
13. Fascia, logo, 1 table, 4 chairs, carpet, 3 lights, power box, dustbin at booth.

## SILVER SPONSOR

MULTIPLE BENEFITS WITH SPEAKING AND BRANDING

### Rs 472,000

1. Speaking Slot 15 mins
2. 4x3m furnished octonorm booth
3. Six Delegate Passes and four Exhibition staff Passes
4. Full Page Advt in Event Guide
5. Full Page Company Profile (with logo and contact details) in Event Guide
6. Two company literature items/gift in Delegate Bags
7. Delegate List with contact details after the event.
8. Video of speakers' presentations after the event
9. Sponsor Logo on event promotion
10. Logo on all marketing materials
11. Banner on Event website
12. Company Logo at Venue, Lobby and on Stage as Sponsor
13. Fascia, logo, 2 tables, 6 chairs, carpet, 4 lights, power box, dustbin, magazine rack at booth.

## GOLD SPONSOR

MULTIPLE BENEFITS WITH SPEAKING SLOT

### Rs 590,000

1. Speaking Slot 15 mins
2. 6x3m furnished octonorm booth
3. Twelve Delegate Passes
4. Full Page Advt in Event Guide
5. Full Page Company Profile (with logo, contact details) in Event Guide
6. Two company literature items/gift in Delegate Bags
7. Delegate List with contact details after the event.
8. Video of speakers' presentations after the event
9. Sponsor Logo on event promotion
10. Logo on all marketing materials
11. Banner on Event website
12. Prominent Company branding at Venue, Lobby and on Stage as Gold Sponsor
13. Buntings on 4 poles at venue.
14. Custom Fascia, logo, 4 tables, 8 chairs, carpet, 6 lights, 2 power boxes, dustbin, 42" LED at booth.

Contact IMR Media for additional furniture, LEDs, customisation an Backdrop flex/ vinyl baneers

## IMR Media Pvt Ltd

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