

DEFSAT

India's First International Defence and Space conference and expo



Manekshaw Centre

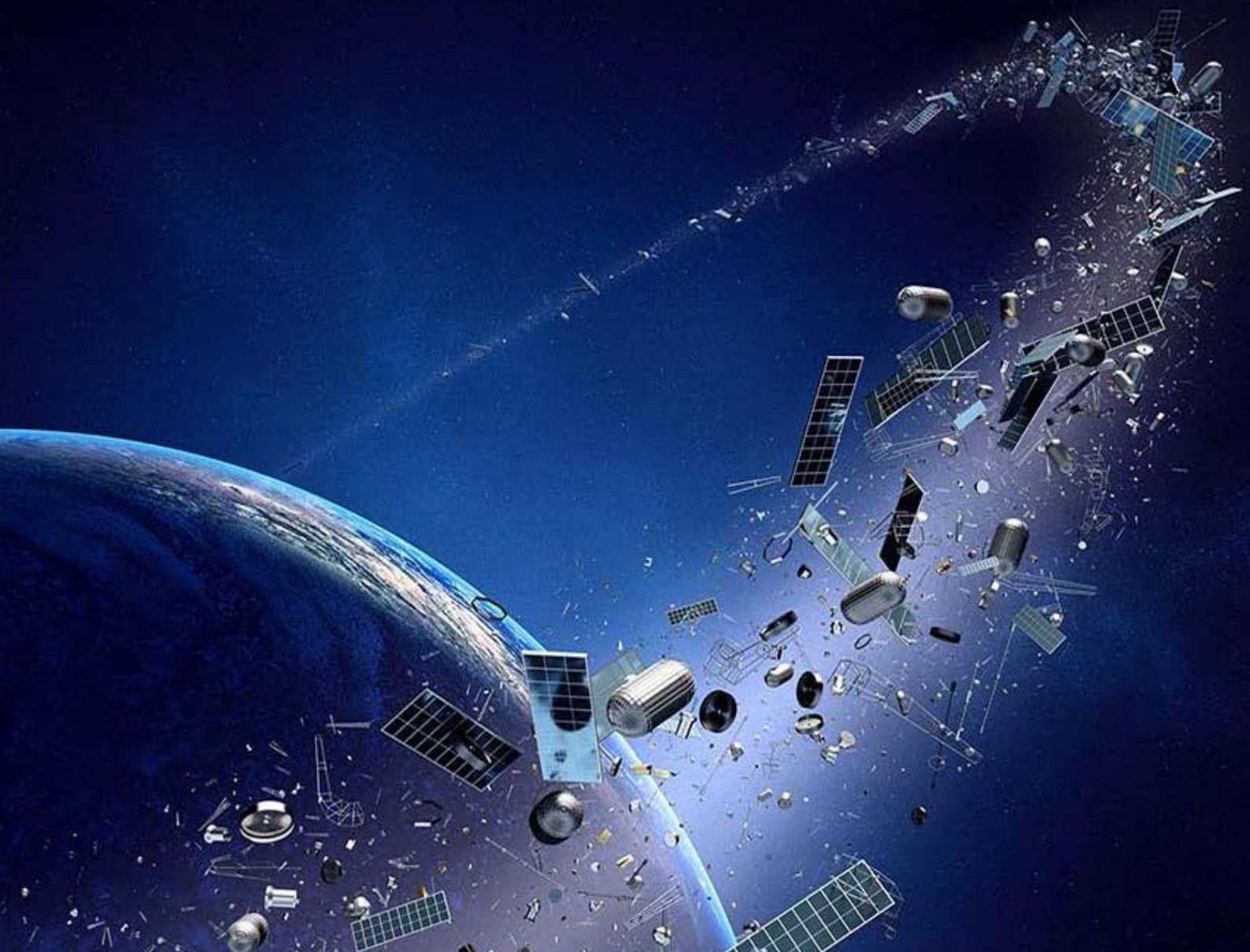
Delhi Cantt, New Delhi

27, 28 & 29

April, 2023

— *Shri Narendra Modi, Prime Minister of India*
Mission DefSpace , Def Expo-22

“ Space technology is an example of what security will mean for any strong nation in the future. Various challenges in this area have been reviewed and identified by the three services. We have to work fast to solve them. ”



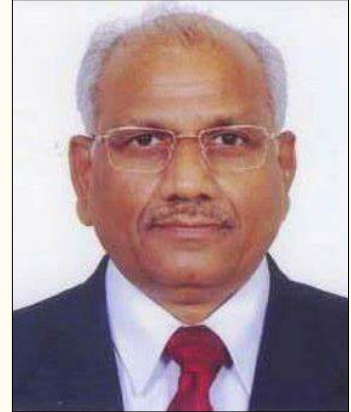
Dr Subba Rao Pavuluri

President, SIA-INDIA

FOREWORD

Today India is marking its journey towards achieving the vision of "Atmanirbharta" by Prime Minister Shri Narendra Modi. He has also launched a mission DefSpace with the mantra of Intent, Innovation & Implementation in the defence sector including 75 challenges providing a unique opportunity for Indian space startups and MSMEs.

India is ushering into the commercial Space and Satellite communication era where the opportunities are humongous, enhancing its global digital footprint. The emergence of the commercial space sector and startups throw up some attractive possibilities for the country's Defence requirements.



We are glad that the Ministry of Defence recognizes that progress needs to be accelerated by harnessing the country's national capability in all its forms. SIA-INDIA is committed to promoting the growth of the space sector in India both in the private and defence sectors and contributing to the country's economic growth and progress towards self-reliance.

SIA-INDIA is organizing the DefSAT-23, India's First International Defence and Space conference and expo on 27, 28, and 29 April 2023 at Manekshaw Centre, Delhi Cantt. The aim is to leverage the space power to enhance our defence capabilities and protect our national assets.

I am confident that the DefSAT 2023 will create a synergy between the civilian and military sectors, facilitating collaborative communication, and identifying cutting-edge technologies and capabilities to meet the needs of both.

We welcome you all to this event and make the most of this platform to exchange ideas, share knowledge and explore possibilities for collaboration. Let us come together and work together to achieve our common goal of a self-reliant and technologically advanced India.

जय हिन्द!



Date: April 27, 2023

Dr Subba Rao Pavuluri

SATCOM INDUSTRY ASSOCIATION

Suite B-306, 3rd Floor, Somdatt Chambers-I, 5, Bhikaji Cama Place, New Delhi-110066

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Lt. Gen. PJS Pannu

PVSM, AVSM, VSM (Retd)

**Former Deputy Chief, Indian Integrated Defence Staff (Operations)
Chair of the Aerospace and Defence Committee, SIA-INDIA**

MESSAGE



The global race to outer space has surpassed preceding strides. Nations like India can ill afford to procrastinate or relegate this domain to lower significance. The Space sector must pursue timely prospects, through filling in gaps. Private Space players can very quickly step-in and provide solutions with scales that governments cannot. The future wars and peaceful economic growth are both reliant of Space Capabilities. India must define its Space philosophy, doctrine and strategy to enable building a tight road-map for the industry. India may find it difficult to outmatch the adversaries in short term, unless we empower private Defence and Industrial complex to take a lead in the medium to long term. DefSat 2023 is designed to offer directorial answers.

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Lt Gen Sunil Srivastava

AVSM, VSM (Retd)
Director, CENJOWS**

MESSAGE

DefSAT 2023 comes at a watershed moment when a resurgent and rising India has promulgated a Space Policy with a Vision to develop space capabilities with a flourishing commercial presence in space, for ensuring, inter-alia, Nation's Socio-economic development and Security. All consumers (Public and Private) of Space technology and services, shall be free to directly procure them from any source, Public or Private. India's continued stellar growth story will be underpinned by empowerment of remote and digitally deprived India through emerging affordable capabilities in Space. However, growth is contingent on peace, stability and security. Space technologies are very advanced, critical and inherently dual use. Ever-increasing digitisation and network centric multi-domain warfighting has enhanced the salience of Space-based capabilities like sensing, imagery, communications, precise location, weather and Space-situational awareness for the warfighter manifold. The ongoing conflict in Ukraine has witnessed the exploitation of commercial space products for military use, being deployed at scale, evolving on the battlefield in face of non-kinetic threats. Indian Armed Forces got a first dedicated satellite, Rukmini, in 2013, after 65 years after independence. Now is the time for an Atmanirbhar Bharat to breakout in the Space domain, enabling our defence forces in all domains- land, aerospace, maritime, and information, propelled by burgeoning, determined and exceptionally innovative space start-ups, and an enabling investment climate. The achievements showcased by our startups and SMEs during the last two years, inspire tremendous confidence. The response of Startups and MSMEs to the 75 Defence Space Challenges has been overwhelming.



CENJOWS is privileged to be a knowledge partner with SIA India for DefSAT-2023, which brings together all stakeholders- policy makers, regulators, users, Scientists, Industry, academia and startups, to brainstorm the challenges through curated thematic sessions, with domain experts par-excellence, to find new pathways to turn these challenges into opportunities through innovative solutions.

जय हिन्द!

CENTRE FOR JOINT WARFARE STUDIES

Room No 301,B-2 Wing, 3rd Floor, Pt Deendayal Antyodaya Bhawan CGO Complex, Lodhi Road New Delhi – 110003

Tel: 011-24366484 • Email: cenjows@cenjows.in, cenjows@yahoo.com • www.cenjows.in

Mr Anil Prakash

Director General, SIA-INDIA

MESSAGE

Space is a final frontier of warfare and a critical component of next generation National offense and defence. The space-based capabilities are critical for adding a strategic depth to India's defence preparedness, both in times of peace and conflict. A modern and future-ready Space, Aerospace, and Defence sector which addresses the realities of 21st-century India is the need of the hour.

Given the current geopolitical situation and with warfare becoming increasingly tech-oriented, with seamless and secure network communication being a key element, India needs a better fusion between civil, commercial and defence space programs to ensure the most efficient use of the national resources and avoid duplication in R&D efforts.

Civil, commercial and defence space sectors need coordinated actions among the stakeholders with a clear policy steer, a forward-looking roadmap, long-term planning and an interdisciplinary approach encompassing all stakeholders for an efficient tech spin-off that can serve the needs, thus creating economic growth, employment, and boosting R&D activities.

Encouraged by the Prime Minister's Leadership, the Ministry of Defence's forward-looking approach, and ISRO's Vision, SIA-INDIA is organising the first edition of DEFSAT-23 [Conference and Expo] on 27, 28 and 29 April 2023 at the Manekshaw Centre, Delhi Cantt. We are encouraged by esteemed support from the NITI-Aayog, ISRO, NSIL, DRDO, the Department of Defence Production, Ministry of Defence. We could not have done this without the encouragement and support from our knowledge partners CENJOWS, CAPS, CLAWS and NMF.

Hosted for the first time by SIA-INDIA, DEFSAT-2023 is a global congregation of industry experts, government, policymakers and thought leaders to discuss strategic measures and way forward for the defence & space sector.

I wish you all a fruitful and productive conference and look forward to the insightful discussions and innovative solutions that will emerge from this platform.

We are thankful to associations, industry and media partners for their support. An outcome report will be released shortly after the event and its recommendations will be shared with the concerned ministries and departments etc.



Date: April 27, 2023

Mr Anil Prakash

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About DefSAT 2023

Inspired by the leadership of the Prime Minister, the forward-looking approach of the Ministry of Defence, the vision of the Department of Space, and the encouragement from stakeholders amongst the defence practitioners and space industry, SIA-India is pleased to announce DefSAT 2023. This is India's First International Defence and Space conference and expo that will focus on the intersection of strategy and industrialization for space applications in national security. With the support of our knowledge partners CENJOWS, CAPS, CLAWS, and NMF, we invite you to mark your calendar for DefSAT 2023 from 27-29 April 2023 at the Manekshaw Centre in New Delhi.

Space has become increasingly important for both commercial and military purposes, leading to significant geopolitical shifts as countries vie for influence. The demand for space-based assets and technologies has grown, including satellites, launch vehicles, and ground control systems, as well as an increased focus on research and development. To maintain an edge in this rapidly evolving domain, it is crucial to integrate cutting-edge technology from civil, commercial, and military space domains in the application, operationalization, and protection of military space capabilities.

DefSAT 2023: India's First International Defence and Space conference and expo 27-29 April 2023, Manekshaw Centre Delhi Cantt, New Delhi, India.

STRUCTURE & OBJECTIVES

SIA-India's DefSat 2023 is an annual event that aims to explore India's ambitions in the space domain, with a focus on matching national security requirements with industrialized solutions, disruptive innovations, and technology discovery. The conference brings together government officials, military commanders, think tanks, industry professionals, academia, and leaders in disruptive technologies from India and overseas.

Featuring an impressive line-up of speakers from the three services, DRDO, MoD, ISRO, Department of Space, think tanks, academia, and industry experts, DefSat 2023 will cover a wide range of topics. The conference is intended to create a platform for engagement between not just the defence practitioners and industry, but also Diplomatic officials from various countries to explore areas of cooperation and collaboration in trade, strategy and space diplomacy.

The conference offers keynote speeches, interactive panel discussions, and workshops to provide unparalleled insights into the future of these industries. Attendees will have opportunities to network with experts and peers, explore new products and technologies, and engage in meaningful conversations about the most pressing issues facing the defence and space sectors.

The aim of DefSAT-2023 is to create a synergy between the civilian and military sectors, facilitating collaborative communication and identifying cutting-edge technologies and capabilities to meet the needs of both. The objective is to foster efficient procurement processes, strengthen the industrial base, and enhance national security objectives. To achieve this goal, DefSAT-2023 strives for multi-year roadmap, innovative procurement methodologies, and policy interventions to encourage development, construction, and investment in industrial capabilities. DefSAT-2023 represents a crucial step towards creating a resilient and robust industrial ecosystem for a secure future.

SIA-India released a position paper on "Self-Reliance in Defence Space - inclusion of Space Sector in Discharge of Defence Offset Obligations". This Position paper was released on 20th April, 2022 by our Honourable President Dr. Subba Rao Pavuluri, SIA-India.

To read [CLICK HERE!](#)

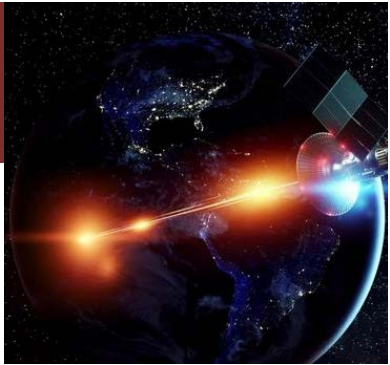


IndSpace Exercise: Industrial Space Wargame (Entry by invitation only, NO walk-ins)

A simulated, scenario-based, interactive tabletop exercise that tests the capability of the space industry to respond to contingency or crisis situations. Factors such as resources, logistics, sequence of action, and how long each phase of the plan will take can be tested. The defence practitioners and industry stakeholders put their heads together to assess the requisite industrialised solution, disruptive innovations and technology discovery in space and counter-space capabilities that are needed by India to protect its national security interests in simulated scenarios. This is the first in a series of many such exercises to be unfolded periodically.

Space Diplomacy & International Collaboration in Defence Space (Entry by invitation only, NO walk-ins)

The role of space in future global conflicts is expected to grow as countries increasingly rely on space-based assets. Space diplomacy is becoming increasingly important as countries seek to establish norms and regulations governing the use of space-based assets for military purposes. Collaborative efforts such as trade, joint research and development and shared use of space-based assets can help establish mutual trust, promote transparency, and reduce the risk of misunderstandings.



Power session: Forging Global Cooperation in Trade, Strategy and Space Diplomacy (Entry by invitation only, NO walk-ins)

A high powered roundtable discussion session for diplomatic officials from Foreign Embassies and the Industry to explore opportunities for cooperation and collaboration in trade, strategy and space diplomacy.

Space Security - Philosophy, Doctrines and Strategies; connecting requirements and industrial capabilities (Entry by invitation only, NO walk-ins)

A roundtable discussion on the modern national security doctrines and strategies and space security as a critical component of that. National security doctrines and strategies should be developed with a comprehensive approach to space security, incorporating both defensive and offensive capabilities. As we move further into the space age, it is essential that governments work closely with industry to develop the necessary capabilities to defend their space-based assets and maintain their strategic advantage.



SCHEDULE

Start	End	Duration	Description
Day One - Thursday 27-Apr 2023 (By Special Invitation only)			
09:30	12:30	03:00	<p>SI01: IndSpace Exercise: Industrial Space Wargame (Entry by invitation only, NO walk-ins) - A simulated, scenario-based, interactive tabletop exercise that tests the capability of the space industry to respond to contingency or crisis situations. Factors such as resources, logistics, sequence of action, and how long each phase of the plan will take can be tested. The defence practitioners and industry stakeholders put their heads together to assess the requisite industrialised solution, disruptive innovations and technology discovery in space and counter-space capabilities that are needed by India to protect its national security interests in simulated scenarios. This is the first in a series of many such exercises to be unfolded periodically.</p> <p>Chair: Lt General Vinod G. Khandare, PVSM, AVSM, SM (Retd.), Principal Adviser in the Ministry of Defence</p> <p>Convenor: Lt Gen PJS Pannu, PVSM, AVSM, VSM(Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations) and Chair of the Aerospace and Defence Committee at SIA-India</p> <p>Industry & Academia – IIT Tirupati, Ananth Technologies, Bharat Electronics Limited, Hughes Systique Corporation, L&T Defence, Centum Electronics, Alpha Design Technologies Ltd, SatSure, Manastu Aerospace, Saptang Labs, Inspecity, Tantrayut, Comsat Systems, Saankhya Labs, QuNu Labs etc.</p> <p>Government – IN-SPACe, Niti Aayog, ISRO, DRDO, Department of Science and Technology, Invest India</p> <p>Think Tanks – CENJOWS, CAPS, CLAWS, NMF, NIAS, RIS</p> <p>Legal Experts – Dr Ranjana Kaul, Mr Abhishek Malhotra, Mr Kaushik Moitra, Ms Seema Jhingan, Mr Sangeet Rai</p> <p>Consulting – EY, PWC, Frost and Sullivan, Synergia Foundation</p> <p>Other experts</p>
12:30	13:00	0:30	Exhibition & Registration Open (RXL)
13:00	14:00	1:00	Networking Lunch
14.00	14.30	0.30	<p>SI02: Opening Plenary</p> <p>Welcome Address: Dr Subba Rao Pavuluri, President, SIA-India</p> <p>Special Address: Dr P. K. Jain, Director PMAD, IN-SPACe</p> <p>Special Address: Dr Shailesh Nayak, Director NIAS and Former Secretary MoES</p>

SCHEDULE

14:30	16:00	1:30	<p>SI03: Space Diplomacy & International Collaboration in Defence Space (Entry by invitation only, NO walk-ins)</p> <p>The role of space in future global conflicts is expected to grow as countries increasingly rely on space-based assets. Space diplomacy is becoming increasingly important as countries seek to establish norms and regulations governing the use of space-based assets for military purposes. Collaborative efforts such as trade, joint research and development and shared use of space-based assets can help establish mutual trust, promote transparency, and reduce the risk of misunderstandings.</p> <p>Chair and Moderator: Dr Bhaskar Balakrishnan, Fmr. Ambassador & Fellow for Science Diplomacy. Research and Information System (RIS)</p> <p>Speakers:</p> <p>Dr P. K. Jain, Director PMAD, IN-SPACE</p> <p>Dr Chaitanya Giri, Associate Professor, Flame University</p> <p>Cdr Subhash Ahlawat IN (Retd), Director Sales, Centum Electronics</p> <p>Mr Sameer Guduru, Director, Digital Economy, Aerospace & Defence, USIBC</p> <p>Air Cmde Terry Van Haren DSM, Retd., Managing Director, LeoLabs Australia</p>
16:00	16:30	00:30	Networking Tea - End of Day One of Conference & Exhibition
16:30	18:00	1:30	<p>SI04: Power session: Forging Global Cooperation in Trade, Strategy and Space Diplomacy. (Entry by invitation only, NO walk-ins)</p> <p>A roundtable discussion between representatives from Foreign Embassy and the Industry to explore opportunities.</p> <p>Chair & Moderator: Amb. Rakesh Sood, Foreign Affairs, Economic Diplomacy and International Security</p> <p>Diplomatic participation: Armenia, Australia, Austria, France, Hungary, Japan, Kenya, Nepal, Sri Lanka, Sweden, Taiwan, United States of America</p>

Day Two – Friday 28-April 2023 (Ashok Hall)

8:30	9:00	0:30	Registration
9:00	10:30	1:30	<p>GI01: Inaugural Session</p> <p>Welcome Address: Dr Subbarao Pavuluri, President SIA-India and Chairman, Ananth Technologies Limited</p> <p>Thematic Address: Lt Gen PJS Pannu, PVSM, AVSM, VSM(Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations) and Chair of the Aerospace and Defence Committee at SIA-India</p> <p>Special Address: Air Marshal Surat Singh AVSM VM VSM, Director General Air (Operations)</p> <p>Special Address: Lt Gen Tarun Kumar Aich, AVSM, Deputy Chief of Army Staff (Strategy)</p> <p>Special Guest of Honour: Shri S. Somanath, Secretary Department of Space and Chairman, ISRO</p> <p>Special Guest of Honour: Dr G Satheesh Reddy, Scientific Adviser to Raksha Mantri.</p> <p>Vote of Thanks: Lt. Gen Sunil Srivastava, AVSM, VSM** (Retd) Director, CENJOWS</p>

SCHEDULE

10:30	11:00	0:30	Exhibition Open at RXL and Networking Tea Break
11:00	11:30	0:30	GI02: Keynote Address: Environmental Scan by Lt. Gen Sunil Srivastava, AVSM, VSM** (Retd) Director, CENJOWS
11:30	12:30	1:00	<p>GI03: A Dialogue on Defence Space Realm and Required Capabilities</p> <p>By combining space-based assets with ground-based assets, we can significantly improve our military capabilities and give our services a clear advantage in any conflict. To achieve this, we need to work closely with industry partners to identify new technologies and capabilities that can be developed to meet the unique needs of our military. It is also important to collaborate with international partners to leverage their expertise and knowledge in this area.</p> <p>Chair and Moderator: Air Vice Marshal DV Khot, AVSM, VM, Director General Defence Space Agency</p> <p>Speakers:</p> <p>AVM Rajiva Ranjan VM, ACAS OPS Space Col ADS Herr, Col Strategic Planning (Space) Captain Chandra Kant Kothari, Captain (NSO) Space</p>
12:30	13:00	0:30	GI04: Tech Brief – Dr Rao Ramayanam, HawkEye 360
13:00	14:00	1:00	Networking Lunch
14:00	15:30	1:30	<p>GI05: Intelligence Preparation of Battlefield – Sensors, Data, Information, Intelligence and everything in between</p> <p>As a crucial part of the Intelligence Preparation of the Battlefield (IPB) process, it is essential for the industry to provide advanced Space Intelligence, Surveillance, and Reconnaissance (ISR) capabilities. This can be achieved using various technologies such as satellite imagery, radar, and signals intelligence to analyse the environment and threats, thus maximizing the combat power of forces at critical locations and times on the battlefield. In today's world where the volume and complexity of INT data make it challenging to identify and address security threats in a timely manner, analytics and AI are playing a critical role in extracting national security intelligence from information to provide insights that can help identify potential security intel.</p> <p>Keynote Address: “Space Enablement – Intelligised IPB for Multi Domain Battlefield” Brig Anshuman Narang, Author and ISR Domain Expert</p> <p>Chair and Moderator: Lt Gen PJS Pannu, PVSM, AVSM, VSM(Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations) and Chair of the Defence Space Committee at SIA-India</p> <p>Speakers:</p> <p>Mr Prateep Basu, CEO, KaleidEO Dr Rao Ramayanam, HawkEye 360 Brig Anshuman Narang, Author and ISR Domain Expert Lt. Col Amandeep Singh, Spatial Domain Expert and Author Gp Capt Arvind Pandey (Retd), Sr. Fellow, Geospatial Intelligence in Military Operations, CAPS Mr Toby Simon, Founder & President, Synergia Foundation</p>

SCHEDULE

15:30	16:10	0:40	<p>GI06: A Dialogue on Resilient PNT Chair and Moderator: Dr PSR Srinivasa Sastry, Director DSP, DRDO Speakers: Shri Manish A Saxena, Director SATNAV-PO, ISRO Headquarters Dr Roshan Srivastav Project Director Technology Innovation Hub, Positioning and Precision Technologies, IIT Tirupati</p>
16:10	16:30	0:20	Networking Tea Break
16:30	18:00	1:30	<p>SI05: Space Security - Philosophy, Doctrines and Strategies; connecting requirements and industrial capabilities. (Entry by invitation only, NO walk-ins) A roundtable discussion on the modern national security doctrines and strategies and space security as a critical component of that. National security doctrines and strategies should be developed with a comprehensive approach to space security, incorporating both defensive and offensive capabilities. As we move further into the space age, it is essential that governments work closely with industry to develop the necessary capabilities to defend their space-based assets and maintain their strategic advantage. Chair & Moderator: Lt General Vinod G. Khandare, PVSM, AVSM, SM (Retd.), Principal Adviser in the Ministry of Defence Speakers: Lt Gen. Sunil Srivastava, AVSM, VSM** (Retd), Director, CENJOWS Air Marshal Anil Chopra, PVSM, AVSM, VM, VSM (Retd) Director General, CAPS Lt. Gen PS Rajeshwar, PVSM, AVSM, VSM, ADC (Retd) Director, CLAWS Gp Capt. Puneet Bhalla, (Retd), Sr Research Fellow, CENJOWS Special Invitees from Industry, DoS, DRDO and Think Tanks</p>
End of Day 2 of the Conference and Exhibition			

Day 3 - Sat 29 Apr 2023 (Ashok Hall)			
8:30	9:00	0:30	Registration
9:00	10:00	1:00	<p>GI07: Opening Plenary Welcome Address: Dr Subbarao Pavuluri, President SIA-India and Chairman, Ananth Technologies Limited Special Address: Dr Anupam Sharma, Associate Director, DSP, DRDO Special Address: Dr Ranjana N, Director DSTA, DRDO</p>
10:00	10:20	0:20	Exhibition Open at RXL and Networking Tea Break

SCHEDULE

10:20	11:40	1:20	<p>GI08: Secure Satcom and integration with IoBT/IoMT systems</p> <p>Industry can support the objective of secure military Satcom and integration with IoBT/IoMT systems by providing reliable and secure Satcom solutions and developing rugged and secure IoBT/IoMT devices. Besides ComSec and Transec, a space cybersecurity framework become essential for implementing effective threat detection and countermeasure systems. This must be supported with an adequate spectrum to help the military achieve its mission and protect national security.</p> <p>Chair and Moderator: Maj Gen Sanjiv Sharma, SM, ADG Tac C, DG Signals</p> <p>Speakers:</p> <p>Dr Ranjana N, Director DSTA, DRDO</p> <p>Mr Sanjeev K Gupta, Associate Director, Satcom Applications, SATCOM-PO, ISRO Headquarters</p> <p>Mr Vinod Kaul, RVP South and South-East Asia, Gilat Satellite Networks</p> <p>Mr Sai Krishna, CEO, Pinaca Labs</p> <p>Mr Dilip Singh, CTO, QuNu Labs</p>
11:40	13:00	1:20	<p>GI09: Enabling uninterrupted access to Space - Impact Prevention, mitigation, preparedness, response and Recovery.</p> <p>Maintaining uninterrupted access to space is crucial for national security. The threat surface includes adversary action, unintended accidents or planetary occurrences and requires building resilience by hardening, detecting potential threats and remedial measures. Some potent technologies in the toolkit are SSA, RPO, OSAM, redundancy by design, replacing assets, and launch on-demand that helps in preventing and mitigating impacts, preparing for contingencies, responding to emergencies, and recovering from disruptions towards a structured approach in addressing the threat of denial, degradation, disruption or destruction of space capabilities.</p> <p>Chair: Dr Anupam Sharma, Associate Director, DSP, DRDO</p> <p>Moderator: Shri Jidesh, Associate Director, SIPO, ISRO Headquarters</p> <p>Speakers:</p> <p>Gp Capt TH Anand Rao, Senior Fellow, CAPS, Space Security and Policy Analysis</p> <p>Mr Sasmith Reddi, Director, Global Sales Engineering, STE iDirect</p> <p>Dr Dibyendu Nandi, Head, Centre of Excellence in Space Science, Indian Institute of Science Education and Research (IISER) Kolkata</p> <p>Mr Arun Mannath, Associate Director, Aerospace & Defence, Frost and Sullivan</p> <p>Dr Rachit Bhatia, Space Safety Analytics & Research Lead, Leolabs Inc.</p>
13:00	14:00	1:00	Networking Lunch

SCHEDULE

14:00	15:20	1:20	<p>G110: Civil-Military Fusion - Catalysing the industrial base and overcoming supply chain challenges.</p> <p>By creating a framework for closer collaboration and communication between the civilian and military sectors, CMF can help to identify and develop technologies and capabilities that meet the needs of both sectors. This can lead to more efficient and effective procurement processes and a stronger and more resilient industrial base that can better support national security objectives. It is imperative to provide the industry with a multi-year roadmap and interventions with policy tools including innovative procurement methodologies for these industrial capabilities to be developed, built, and invested in.</p> <p>Chair: Shri Hari Babu Srivastava, Director General, Technology Management, DRDO</p> <p>Moderator: Prof. Chaitanya Giri, Associate Professor, FLAME University and Consultant RIS</p> <p>Speakers:</p> <p>Air Marshal (Dr) Rajeev Sachdeva AVSM (Retd), Fmr. Deputy Chief of Integrated Defence Staff and also officiated as Additional Secretary (Air) at DMA, under CDS MoD</p> <p>Col. Kuber Kandalai, E&Y</p> <p>Capt Vishal Kanwar, PWC</p> <p>Col.Rajiv Chib (Retd), CEO, Insighteon Consulting</p>
15:20	15:50	0:30	Networking Tea Break
15:50	17:10	1:20	<p>G111: Closing capability gaps and retaining the high ground by integrating drones, HAPS and satellites.</p> <p>Together, these technologies can provide a more complete picture of the security landscape and help to identify and mitigate potential threats more quickly and effectively. However, integrating drones, HAPS, and satellites requires a coordinated and well-planned approach that considers each technology's unique capabilities and requirements.</p> <p>Keynote Address: Lt Gen Dr VK Saxena, PVSM, AVSM, VSM (Retd), Fmr Director General of the Corps of Army Air Defence*</p> <p>Chair and Moderator: Lt Gen PJS Pannu, PVSM, AVSM, VSM (Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations) and Chair of the Aerospace and Defence Committee at SIA-India</p> <p>Speakers:</p> <p>Lt Gen Dr VK Saxena, PVSM, AVSM, VSM (Retd), Fmr Director General of the Corps of Army Air Defence</p> <p>Air Marshal GS Bedi, AVSM, VM, VSM (Retd) Former DGIS</p> <p>Mr Toby Simon, Founder & President, Synergia Foundation</p> <p>Mr Raj Sharma, President, National Association of Drone Developers & Space Organization (NADDSO)</p> <p>Mr Naveen Navlani, Associate Director, Global Military Sales, ideaForge Technology Ltd</p> <p>Mr Jayant Sinha, Program Manager, Elcomponics Aerob Technologies India Pvt Ltd</p>
17:10	17:30	0:20	<p>Closing Plenary</p> <p>Closing Remarks; Dr Subba Rao Pavuluri, President SIA-India and CMD Ananth Technology</p> <p>G112: Closing Summary: Lt Gen PJS Pannu, PVSM, AVSM, VSM(Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations) and Chair of the Aerospace and Defence Committee at SIA-India</p>
End of Day 3 and Closing of the Conference and Exhibition			

ORGANISING COMMITTEE

- ❖ Dr Shailesh Nayak, Former Secretary MoES, Director NIAS
- ❖ Dr Subba Rao Pavuluri, President, SIA-INDIA and CMD, Ananth Technology Limited
- ❖ Lt. Gen (Dr) Subrata Saha, PVSM, UYSM, YSM, VSM** (Retd), Former Member of the National Security Advisory Board (NSAB)
- ❖ Lt. Gen PJS Pannu, PVSM, AVSM, VSM (Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations), Chair of the Aerospace & Defence committee at SIA-INDIA
- ❖ Lt Gen. Sunil Srivastava, AVSM, VSM** (Retd), Director, CENJOWS
- ❖ Air Marshal Anil Chopra, PVSM AVSM VM VSM (Retd), Director General, CAPS
- ❖ Lt Gen PS Rajeshwar, PVSM, AVSM, VSM (Retd), Director General, CLAWS
- ❖ VAdm Pradeep Chauhan, AVSM & Bar, VSM, IN (Retd), Director General, NMF
- ❖ Air Marshal Gurcharan Singh Bedi, AVSM, VM, VSM, Former DGIS
- ❖ Lt. Gen AKS Chandele, PVSM, AVSM (Retd), President- Defense, Internal Security & Public Safety, Geospatial World and Former DGEME
- ❖ Amb. (Dr.) Bhaskar Balakrishnan, Science Diplomacy Fellow at RIS, New Delhi, Former Ambassador of India.
- ❖ Mr Anil Prakash, Director General, SIA-INDIA

PROGRAM COMMITTEE

- ❖ Lt. Gen PJS Pannu, PVSM, AVSM, VSM (Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations), Chair of the Aerospace & Defence committee at SIA-INDIA
- ❖ Lt. Gen. (Dr) Anil Kapoor, AVSM, VSM (Retd).
- ❖ Maj. Gen. (Dr) Pawan Anand, AVSM (Retd). Distinguished Fellow USI of India, Head USI-ANBI
- ❖ Col. KV Kuber (Retd), Director, Aerospace and Defence, EY
- ❖ Air Commodore Savinder Pal Singh, VSM (Retd.), CAPS
- ❖ Gp. Capt. Amitabh Mathur, CENJOWS
- ❖ Mr. Laxmesh BH, Vice President & Head – Missiles and Aerospace Business, L&T Defence
- ❖ Prof. Chaitanya Giri, Associate Professor, FLAME University and Consultant RIS
- ❖ Mr Samit Ray, Regional Director, Government Affairs & Public Policy, Raytheon Technologies
- ❖ Mr D S Govindrajan, Executive Board Member, SIA-INDIA & President, Anira Communications
- ❖ Mr Rajeev Gambhir, Sr. Director, Technology and Policy, SIA-INDIA

EMINENT SPEAKERS



Shri S. Somanath

Secretary Department of Space and Chairman ISRO



Dr Shailesh Nayak

Director NIAS and Former Secretary MoES



Lt Gen Tarun Kumar Aich

AVSM, Deputy Chief of Army Staff (Strategy)



Lt General Vinod G. Khandare

PVSM, AVSM, SM (Retd.), Principal Adviser in the Ministry of Defence



Dr Subba Rao Pavuluri

President SIA-India and Chairman, Ananth technologies Limited



Lt General PJS Pannu

PVSM, AVSM, VSM (Retd) Former Deputy Chief Indian Integrated Defence Staff (Operations), Chair of the Aerospace and Defence Committee at SIA-India



Air Marshal Surat Singh

AVSM, VM, VSM, Director General Air (Operations)



Lt Gen Sunil Srivastava

AVSM, VSM** (Retd), Director, CENJOWS



Air Marshal Anil Chopra

PVSM, AVSM, VM, VSM (Retd)
Director General, CAPS



Lt Gen PS Rajeshwar

PVSM, AVSM, VSM, ADC
(Retd) Director, CLAWS



Air Marshal Gurcharan Singh Bedi

AVSM, VM, VSM (Retd)
Former DGIS



Amb Rakesh Sood

Former Diplomat, Foreign
Affairs, Economic Diplomacy
and International Security



Dr P.K Jain

Director PMAD, IN-SPACE



AVM Rajiva Ranjan

VM, ACAS OPS Space



Lt Gen Dr V.K Saxena

PVSM, AVSM, VSM (Retd), Fmr Director
General of the Corps of Army Air Defence



Dr Bhaskar Balakrishnan

Fmr. Ambassador & Fellow for Science Diplomacy,
Research and Information System (RIS)

EMINENT SPEAKERS



Shri Hari Babu Srivastava

Director General, Technology Management, DRDO



Air Vice Marshal DV Khot

AVSM, VM, Director General Defence Space Agency Speakers



Dr Chaitanya Giri

Associate Professor, FLAME University, Editor, Interstellar_Go and Consultant Research and Information System for Developing Countries (RIS)



Air Marshal (Dr) Rajeev Sachdeva

AVSM (Retd), Fmr. Deputy Chief of Integrated Defence Staff and also officiated as Additional Secretary (Air) at DMA, under CDS MoD



Dr Ranjana N

Director DSTA, DRDO



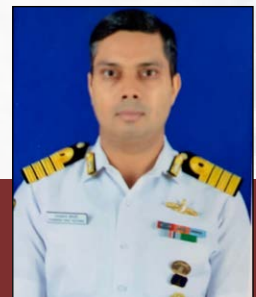
Dr PSR Srinivasa Sastry

Director DSP, DRDO



Shri jidesh

Associate Director, SIPO, ISRO Headquarters



Captain Chandra Kant Kothari

Captain (NSO) Space



Dr Rao Ramayanam

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Brig Anshuman Narang

Author and ISR Domain Expert



Arpan Sahoo

COO at KaleidEO
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**Lt Col
Amandeep Singh**

Spatial Domain Expert &
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**Gp Captian
Arvind Pandey (Retd)**

Sr. Fellow, Geospatial Intelligence
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Mr Toby Simon

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Shri Manish A Saxena

Director SATNAV-PO, ISRO
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Dr Roshan Srivastav

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EMINENT SPEAKERS



**Gp Captain
Puneet Bhalla (Retd)**

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Dr Anupam Sharma

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**Major Gen
Sanjiv Sharma**

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Dr Dibyendu Nandi

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**Air Cmde
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CEO, Insighton Consulting



Mr Raj Sharma
President, National Association
of Drone Developers & Space
Organization (NADDSO)

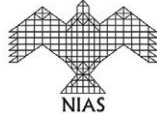


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About SIA- India

SIA-INDIA is a non-profit organization representing the interests of the space industry in India. Our membership includes satellite operators, manufacturers, suppliers, startups, academic institutions, and law firms. The association is committed to serve as a voice for the industry and represent the industry's interests at policy making and regulatory bodies. SIA-INDIA also offers a platform to forge international collaborations and provides an interface with the government.

Our Vision

Thought Leaders for the Satellite Communication Industry in India.

Our Mission

- ❖ Advocacy and representation to Government agencies and relevant stakeholders.
- ❖ Platform for exchanging ideas and networking across relevant industries, associations, and international communities via high level committees to address issues and challenges faced by the industry.
- ❖ Our interventions with state and central Governments and International Regulatory Bodies help create a conducive Business and Regulatory environment that maximizes the long-term benefit to the satellite industry at large and end-users in India.

LEADERS



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Sudhir Gupta
Member,
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Ravi Ailawadhi
Member, MD,
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Joint Doctrine Indian Armed Forces

"Space bestows immense force multiplication capability on the Armed Forces, and the dependence on space assets for military operation is rapidly increasing. Currently, India's space capabilities are mostly driven by civil and commercial requirements, steps for exploitation of space for military applications are being undertaken. Leveraging space power would include protection of our National space assets and exploitation of space to enable defence capabilities across the conflict spectrum".

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— *Dr Subba Rao Pavuluri, President, SIA-INDIA*

“ As a Space Industry Association, we are confident that the Indian space industry has the potential to drive significant progress and innovation and serve the nation, and we are excited to be a part of this journey alongside the Ministry of Defence, Department of Space, ISRO, IN-SPACE and NSIL. ”



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