



15th BIENNIAL INTERNATIONAL SEMINAR
Futuristic Aerospace Technologies: Challenges in Design Validation
INTERNATIONAL CONFERENCE ON MILITARY AIRWORTHINESS
08 FEB 2025 – 09 FEB 2025



SEMINAR SCHEDULE

DAY 1 08 Feb 2025 : Design Challenges in Futuristic and Emerging Aerospace Technologies

08:30 - 09:30 (60 mins)	Registration		
09:30 - 11:00 (90 mins)	Inaugural Function Inaugural Address by: Dr. K Rajalakshmi Menon, DS & DG AERO, DRDO Eye in the Sky: Force Multiplier for Enhancing Combat Effectiveness through Advanced Technologies		
11:00 - 11:30 (30 mins)	High Tea		
Keynote Session – 1 (Hall: Grand Ball Room)			
11:30 - 11:55 (25 mins)	Dr. B K Das, DS & DG ECS, DRDO Advanced Sensor Systems for Fighters in Modern Threat Scenarios		
11:55 - 12:20 (25 mins)	Shri. Ummalaneni Raja Babu, DS & DG MSS, DRDO Enhancing Combat Effectiveness with Precision from Sky: Trends in Air Launched Capabilities		
Session – 1 “Propelling Tomorrow: Future Innovations and Emerging Trends in Air-systems” (Hall: Grand Ball Room) Session Chair - Dr. Shyam Chetty, Formerly Director, NAL, CSIR Session Co-ordinator - Dr. A K Bakare, OS, Dir(Aircraft), CEMILAC, DRDO			
12:20 - 12:55 (35 mins)	Shri. Geraint Rees, Chief Engineer – Defence UK & International Future Programmes, Rolls-Royce Techniques for validating Aerospace Gas Turbines		
12:55 - 13:20 (25 mins)	Shri. Jitendra J Jadhav, DS & DG, ADA Emerging Technologies for Next Generation Combat Aircraft		
13:20 - 14:00 (40 mins)	Shri. APVS Prasad, OS, Chief Executive (Airworthiness), CEMILAC, DRDO Challenges in Design Validation of Next Generation Manned and Unmanned Air Systems		
14:00 - 15:00 (60 mins)	Lunch		
Parallel Session – 2A “Horizons of Innovation: Air-Launched Capabilities and Breakthrough Technologies” (Grand Ball Room) Session Chair - Shri. J K Sharma, Formerly CE(A), CEMILAC, DRDO Session Co-ordinator - Dr. Rajagopal S, PGD(TAPAS & UAV), ADE		Parallel Session – 2B “Aerospace Frontiers: Propulsion, Escape Systems, and Cyber Integration” (Royal Ball Room) Session Chair - Shri. M Z Siddique, DS & Formerly DG (Aero, NS&M), DRDO Session Co-ordinator - Dr. V Madhusudana Rao, OS, PD (LCA AF MK2), ADA	
15:00 - 15:35 (35 mins)	Dr. Aniruddha Mukhopadhyay, Lead Chief Technologist, Ansys Inc. Keeping Pace with Cyber Physical Evolution in Defence System	15:00 - 15:35 (35 mins)	Shri. Steve Roberts, Director Technical & Shri. C Venugopal, Head of Operations-India, Martin-Baker Latest Advancements to Crew Escape System Approach to Certification and Plan for Continued Support
15:35 - 16:10 (35 mins)	Shri. Simon Page-Browne, Head of Programmes (UK),Airborne Systems Integration, MBDA UK Advancements in Air-Launched Capabilities and its Testing for Certification	15:35 - 16:00 (25 mins)	Smt. Suma Varughese, DS & DG MCC, DRDO Cyber Security for Avionics Systems
16:10 - 16:35 (25 mins)	Dr. Abhay A Pashilkar, Director, NAL Challenges in the Realization of the Civil Aircraft Dream for India	16:00 - 16:35 (35 mins)	Shri. Alok Nanda, CTO, GE Aerospace Advancements in Future Propulsive Technologies and its Testing for Certification
16:35 - 17:00 (25 mins)	Smt. Sumana Prakash, CD (Systems & Structures), ARDC, HAL Road Map for Pioneering Innovation for Future Aerospace Growth	16:35 - 17:00 (25 mins)	Dr. S V Ramana Murthy, OS & Director GTRE, DRDO Emerging Technologies in Military Aero Gas Turbine Engines: An Indian Perspective
17:00 - 17:30 (30 mins)	Tea Break	17:00 - 17:30 (30 mins)	Tea Break
Parallel Session – 3A “Smarter Skies: AI, Cybersecurity, and Advanced Targeting” (Grand Ball Room) Session Chair - Dr. C M. Ananda, Chief Scientist & Programme Dir (Civil Aircraft), CSIR-NAL Session Co-ordinator - Smt. N A Anuradha, Dir (System) & RD RCMA (S/w) , CEMILAC, DRDO		Parallel Session – 3B “From Atoms to Altitudes: Quantum Frontiers and Extreme Materials” (Royal Ball Room) Session Chair - Dr. Chandrika Kaushik, OS & DG (PC&SI) Session Co-ordinator - Dr. S Kale, Director (Material & PI), CEMILAC DRDO	
17:30 - 17:50 (20 mins)	Shri. Suhas Gopinath, CEO, Globals Inc. Cyberwarfare and Cyber Defence for UAS in AI Era	17:30 - 17:50 (20 mins)	Shri. Animesh Aaryan, Founder & Managing Director, TAQBit Labs Quantum Technology for Defence
17:50 – 18:00 (10 mins)	Commodore A Madhavarao (Retd), CMD, BDL Advanced Seekers for Modern Missiles	17:50 – 18:00 (10 mins)	Shri. M K Sridhar, Senior Consultant (Formerly Chief Scientist, NAL), Azista Industries Pvt. Ltd. High Temperature Thermoset Polymer Precursors for Carbon-Carbon Composites
18:30 Onwards	Cultural Programmes, Networking and Dinner		



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DAY 2 09 Feb 2025 : Challenges in Design Validation and Airworthiness for Futuristic Aerospace Technologies

Session – 4 “Safety Critical: Hypersonic Frontiers and Ensuring Safety in the Skies and Beyond” (Hall: Grand Ball Room)

Session Chair - Dr. Dinesh Kumar Singh, DS, Director, HSFC, ISRO
Session Co-ordinator - Dr. Vijay V Patel, TD (CLAW), ADA

09:15 - 09:30 (15 mins)	Dr. Chandrika Kaushik, OS & DG PC&SI, DRDO Navigating Airworthiness in Futuristic Aerospace: Collaboration Strategies for Military Aviation Certification of AI enabled Systems
09:30 - 09:55 (25 mins)	Dr. C Geethaikrishnan, Director DHRC, ISRO Human Rating of Space Vehicle for Manned Space Missions
09:55 - 10:35 (40 mins)	Shri. Felipe San Martin, Vice President Head of Airworthiness & Product Integrity, Airbus Defence & Space Airworthiness and Certification Challenges for Airbus Defence and Space
10:35 - 11:00 (25 mins)	Prof. Gopalan Jagadeesh, Professor, Dept. Of Aerospace Engineering, IISc Long duration Hypersonic Flight – Myth or Reality

11:00 - 11:30 (30 mins)

High Tea

Parallel Session – 5A “Wired for the Skies: Emerging Trends and Enhancing Capabilities” (Grand Ball Room)

Session Chair - Shri S Krishnakumar, Formerly ED (ARDC), HAL
Session Co-ordinator - Dr. A N Vishwanatha Rao, OS, Associate Director, GTRE, DRDO

Parallel Session – 5B “Accelerating to the Future: Advanced Systems and Next-Gen Navigation” (Royal Ball Room)

Session Chair - Shri. V K Prabhulla Chandran, Offg PGD(CA)& Director, ADA
Session Co-ordinator - Shri. S K Jha, GD (MS), CEMILAC, DRDO

11:30 - 12:00 (30 mins)	Shri. Elior Shenhav, Project Manager, Rafael Advanced Defence Systems Centric Operations Using Software Defined Radio and its Testing for Certification	11:30 - 12:00 (30 mins)	Shri. Frederic Xavier Mary & Shri. Cedric Gaschard, Safran Electronics and Defence Advancements in Position Navigation Time Technologies for Future Advanced Aircraft and its Testing Philosophy
12:00 - 12:25 (25 mins)	Shri. Vivek Mishra, CEO, RAPHE mPhibr Latest Advances in UAS for enhancing effective mission capabilities	12:00 - 12:25 (25 mins)	Shri. Y Dilip, OS & Director ADE, DRDO Transformative Roadmap for Military UAVs

Parallel Session – 6 A “Safe and Certified: DER Concepts and Cosmic Ambitions” (Grand Ball Room)

Session Chair - Dr. Amitabh Saraf, OS, PD(LCA-Tejas) & PD(NCA), ADA
Session Co-ordinator - Dr. Akilesh Pathak, RD RCMA (Hyd, Msl), CEMILAC, DRDO

Parallel Session – 6 B “Factory to Frontline: Advanced Sensors and Capabilities for Combat Aircraft” (Royal Ball Room)

Session Chair - Smt. Asha Garg, OS, Ass. Dir & PGD (MAS), ADE
Session Co-ordinator - Dr. Ganesan S, TD(ABES) GTRE

12:30 - 13:00 (30 mins)	Shri. Varun K. Malik, DER (FAA), CTO, Abeyaantrix Solutions The System Engineering approach to Airworthiness and Certification: DER's (FAA) perspective	12:30 - 12:50 (20 mins)	Shri. Saurabh Dubey, Director - Business Development, India, Raytheon Advanced Sensors and Systems for Enhanced Capability of Combat Collaborative Aircraft and its Testing
13:00 - 13:10 (10 mins)	Shri. Rohan M Ganapathy, CEO & CTO, Bellatrix Aerospace Pvt. Ltd. Unlocking India's Cosmic Potential: Space Reforms and the Rise of Indian Space Companies in the Global Market	12:50 - 13:10 (20 mins)	Air Marshal Shirish Baban Deo (Retd), PVSM, AVSM, VM, VSM, ADC, JSR Dynamics Pvt. Ltd Journey of Start-Up : Air and Ground launched Capabilities
13:10 - 13:20 (10 mins)	Dr. Sanjay Kumar Jha, Formerly CMD Midhani, President, Society for Failure Analysis Various Activities of SFA	13:10 - 13:30 (20 mins)	Shri. Anil Sogi K, General Manager (EW&A/BGCx), Bharat Electronics Ltd. (BEL) Challenges in Design and Testing of EW systems for combat aircraft
13:20 - 13:30 (10 mins)	Dr. U Chandrasekhar, World Bank AI Mission (Consultant) Digital Transformation of Aerospace and Defence Manufacturing Protocols: Opportunities, Challenges and Way Forward		

13:30 - 14:30 (60 mins)

Lunch

14:30 - 15:30
(60 mins)

Release Function (Hall: Grand Ball Room)

Function for the Release of CEMILAC / DRDO Artifacts by **Hon'ble Raksha Rajya Mantri (RRM)**

Session – 7 “Shaping the Future: Leveraging AI, Flight Testing and Advanced Systems” (Hall: Grand Ball Room)

15:30 - 16:25 (55 mins)	Dr. Antonio Monzon, CSEP, Senior Expert Certification Coordinator & DAE – A400M DASS & M-MMS, Airbus Defence & Space Certification of Artificial Intelligence in Military Aviation
16:25 - 16:50 (25 mins)	Air Cmde Mark Meagher, CRPO ASTE & Wg Cdr Prashant Kochhar, IAF Flight Testing: Shaping Aircraft Design, Performance and Safety
16:50 - 17:15 (25 mins)	Dr. Suresh Padmanaban, Associate Director, Collins Aerospace Advanced Systems for Modern Military Aircraft
17:15 Onwards	Tea