

Conference Program



SAE INDIA
Society of Automotive Engineers India

**AEROCON
2024**

Sustainability & Circularity in Aerospace –
Trends, Challenges & Opportunities
June 6-7, 2024 | Bangalore

SAE
INTERNATIONAL

Venue: HAL Management Academy, Bengaluru, Karnataka
<https://maps.app.goo.gl/34snEGD7jMhr3mcr9>

V-28-Apr-2024
(Draft program subject to revision)

Day 1- June 6 , 2024

Time	Session		Venue
08:00–09:00AM	Registration		
	Technical Sessions: Papers, Oral Presentations, Track Invited Talks		
09:00- 10.40AM	Track: Flight & Space Dynamics	Session#: D1H1S1	Hall1
	Track: Materials, Structures & Manufacturing	Session#: D1H2S1	Hall2
	Track: Aerospace Systems Engineering	Session#: D1H3S1	Hall3
	Track: Sustainability & Circularity	Session#: D1H4S1	Hall4
10.40- 11.00AM	Tea Break & Exhibition		
11:00 – 12:40 PM	Inaugural Function		
12.40-02.00PM	Lunch & Exhibition		
	Technical Sessions: Papers, Oral Presentations, Track Invited Talks		
02:00 - 03.40 PM	Track: Flight & Space Dynamics	Session#: D1H1S2	Hall1
	Track: Materials, Structures & Manufacturing	Session#: D1H2S2	Hall2
	Track: Avionics Systems	Session#: D1H3S2	Hall3
	Track: New Technologies Integration	Session#: D1H4S2	Hall4
03.40 - 04.00 PM	Tea Break & Exhibition		
04.00 - 05.40 PM	Track: Flight & Space Dynamics -	Session#: D1H1S3	Hall1
	Track: Materials, Structures & Manufacturing	Session#: D1H2S3	Hall2
	Track: Aerospace Systems Engineering	Session#: D1H3S3	Hall3
	Track: SAE Invited Talks	Session#: D1H4S3	Hall4

Notation: D1H1S1 – implies Day 1, Hall 1, Session 1

Day 2- June 7 , 2024

Time	Topic		Venue
	Technical Sessions: Papers, Oral Presentations, Track Invited Talks		
09:00- 10:40 AM	Track: Flight & Space Dynamics	Session#: D2H1S1	Hall1
	Track: Materials, Structures & Manufacturing	Session#: D2H2S1	Hall2
	Track: Avionics Systems	Session#: D2H3S1	Hall3
	Track: Sustainability & Circularity	Session#: D2H4S1	Hall4
10:40- 11:00 AM	Tea Break & Exhibition		
11:00-12:50 PM	Plenary Sessions		
12:50- 02:00 PM	Lunch & Exhibition		
	Technical Sessions: Papers, Oral Presentations, Track Invited Talks		
02:00- 03.40 PM	Track: Flight & Space Dynamics	Session#: D2H1S2	Hall1
	Track: Materials, Structures & Manufacturing	Session#: D2H2S2	Hall2
	Track: Aerospace Systems Engineering	Session#: D2H3S2	Hall3
	Track: New Technologies Integration	Session#: D2H4S2	Hall4
03.40- 04.00 PM	Tea Break & Exhibition		
04.00 – 05.00 PM	Valedictory & Awards Ceremony		

Notation: D2H1S1 – implies Day 2, Hall 1, Session 1

D1H1S1: Flight & Space Dynamics Track - Hall 1 – 9 AM to 10:40 AM – 6th June

Track Chairs	• Prof. Srisha Rao, IISc • Prof. N Balakrishnan, IISc
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Paper	24AC-0058 / 2024-26-0441	On the Aero-Thermo-Structural Performance of Rectangular and Axisymmetric Scramjet Configurations Gopinath Nagarajan Kirupakaran, Indian Institute of Science; Govindarajan K V, BrahMos Aerospace; Debiprosad Roy Mahapatra, Indian Institute of Science
09:20 – 09:40 AM	Paper	24AC-0278 / 2024-26-0442	High Payload Fraction UAV Design and Performance Evaluation Chandana G, G Shashank Gowda, Adithya Sayeeganesh, Ram Rohit Vannarth, BMS College of Engineering
09:40 – 10:00 AM	Paper	24AC-0289 / 2024-26-0443	Numerical Investigation of the Aerodynamic Characteristics of a Missile Geometry at Mach 4 M Ananth Padmanabha, Bhoomika Prasad, Jayahar Sivasubramanian, M.S. Ramaiah University of Applied Sciences
10:00 – 10:20 AM	Paper	24AC-0050 / 2024-26-0444	Enhancing Sustainable Aviation through Contrail Management – A Framework for Multiple Platforms Sayooj Adavalath Puthiyaveetil, Suresh Padmanabhan, Bhargav HoskoteHanumanthaRao, Collins Aerospace
10:20 – 10:40 AM	Oral	24AC-0120	Enabling Airframe Structures Modelling and Simulation as Certification Means of Compliance - Recommended best practices to demonstrate M&S credibility Jaya Raju NAMALA, Airbus Group India Pvt , Ltd.

D1H1S2: Flight & Space Dynamics Track - Hall 1 – 2 PM to 03:40 PM – 6th June

Track Chairs	• Prof. Srisha Rao, IISc • Prof. N Balakrishnan, IISc
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited	-	Invited talk by Pierre Alexandre Bourbon , Senior Manager and Head of Advanced Numerical Simulations, Airbus
02:20 – 02:40 PM	Paper	24AC-0118 / 2024-26-0446	Numerical Investigation of Aerodynamic Characteristics on a Blunt Cone Model at Various Angles of Attack under Hypersonic Flow Regimes Sushmita Deka, Abhishek Kamal, Sanjukta Patra, Niranjana Sahoo, Indian Institute of Technology
02:40 – 03:00 PM	Paper	24AC-0125 / 2024-26-0447	Static Aeroelastic Analysis and Study of Control Effectiveness of a Typical Reusable Launch Vehicle Ashok Gandhi Pavanasam, Indian Space Research Organisation; Mary Anil, Tecnicas Reunidas Engineers India Pvt. L; Jancy Rose, Indian Space Research Organisation
03:00 – 03:20 PM	Paper	24AC-0032 / 2024-26-0449	CFD Analysis of Cavitation in a Flow through GERotor Pump Dinesh Babu Vasudevan, Vijay Kumar Turaga, HCL Technologies Ltd.
03:20 – 03:40 PM	Paper	24AC-0130 / 2024-26-0450	Analysis for Effect of Angle of Attack on Coefficient of Lift of Wing Structure Pravin P Hujare, Vishwakarma Institute of Information Technology; Deepak P Hujare, MIT World Peace University; Prateek Choudhary, Abhishek Sakat, Rushil Karanjkar, Vishwakarma Institute of Information Technology

D1H1S3: Flight & Space Dynamics Track - Hall 1 – 4 PM to 05:40 PM – 6th June

Track Chairs	• Prof. Srisha Rao, IISc • Prof. N Balakrishnan, IISc
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
04.00 - 04.20 PM	Paper	24AC-0158 / 2024-26-0451	Experimental Analysis of Force Recovery and Response Time using Strain Measurement Sensors in Stress Wave Force Balance Abhishek Kamal, Sushmita Deka, Niranjana Sahoo, Vinayak Kulkarni, Indian Institute of Technology
04:20 – 04:40 PM	Paper	24AC-0188 / 2024-26-0452	Dynamic Ascent Loads Estimation of Winged Reusable Launch Vehicle: Formulation, Analysis and Post Flight Studies Mahind Jayan, VSSC, Indian Space Research Organization; Ashok Gandhi Pavanasam, Indian Space Research Organization; Sajan Daniel, VSSC, Indian Space Research Organization
04:40 – 05:00 PM	Paper	24AC-0131 / 2024-26-0453	Structural Loads for Crew Escape System (CES) of Gaganyaan Launch Vehicle During Abort Subash S, Girish Babu P, Sajan Daniel, VSSC, Indian Space Research Organization
05:00 – 05:20 PM	Paper	24AC-0209 / 2024-26-0454	Configuration and Design of Mobile Checkout System for Ground Testing of Winged Body Reusable Launch Vehicle Vivekanand V, Vikram Sarabhai Space Centre
05:20 – 05:40 PM	Paper	24AC-0233	Experimental Investigation of a Curved Compression Ramp Air Intake at Mach 6 Sushmitha Janakiram, Subrahmanyam Duvvuri, Indian Institute of Science

D2H1S1: Flight & Space Dynamics Track - Hall 1 – 9 AM to 10:40 PM – 7th June

Track Chairs	• Prof. Srisha Rao, IISc • Prof. N Balakrishnan, IISc
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Paper	24AC-0247 / 2024-26-0455	Development of Deployment Mechanism for RAMBHA-LP Payload Onboard Chandrayaan-3 Lander Mohammed Sabir Alam, Johns Paul, Vikram Sarabhai Space Centre; Nirbhay Kumar Upadhyay, Physical Research Laboratory; Santhosh J Nalluveetil, Gollangi Sateesh, Jothiramalingam A, Vikram Sarabhai Space Centre
09:20 – 09:40 AM	Paper	24AC-0256 / 2024-26-0456	Design of Mini-Hexapod Rover System for Future Lunar Exploration Sushanth Suresh Shanbhag, Nidhi, Shachindra Sharma, Krishna Damurothu, R Sandeep, Vikram Sarabhai Space Centre
09:40 – 10:00 AM	Paper	24AC-0293 / 2024-26-0457	Stability of Hypersonic Boundary Layers on Flat Plates with Sharp and Blunt Leading Edges Urvi Sanjiv Mehta, Jayahar Sivasubramanian, Ramaiah University of Applied Sciences
10:00 – 10:20 AM	Paper	24AC-0295 / 2024-26-0458	Development of INLS 3U Unipod Nano Satellite (CubeSat) Dispenser System for 3U Class Satellites Johns Paul, Abdul Salam PM, Rajeev P, Santhosh J Nalluveetil, Jothiramalingam A, Vikram Sarabhai Space Centre
10:20 – 10:40 AM	Oral	24AC-0249	Control of large-amplitude unsteadiness over axisymmetric bodies in high-speed flow Subhajit Das, Subrahmanyam Duvvuri, Indian Institute of Science

D2H1S2: Flight & Space Dynamics Track - Hall 1 – 2 PM to 03:40 PM – 7th June

Track Chairs	• Prof. Srisha Rao, IISc • Prof. N Balakrishnan, IISc
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited	-	Invited Talk by Mr A Vadivelan , Associate Director, Aeronautical Development Establishment, DRDO
02:20 – 02:40 PM	Paper	24AC-0124 / 2024-26-0459	Fast Coupled Load Analysis through Reanalysis Technique: Formulation and Demonstration on Sample Problems Kottresh Kurudimath, Vikram Sarabhai Space Centre; Salil Kanj Jalan, Jancy Rose, Indian Space Research Organisation
02:40 – 03:00 PM	Paper	24AC-0291 / 2024-26-0460	A Comparative Study of RANS and Machine Learning Techniques for Aerodynamic Analysis of Airfoils Lochan M N, Rakshitha N, B K Swathi Prasad, Jayahar Sivasubramanian, Ramaiah University of Applied Sciences
03:00 – 03:20 PM	Paper	24AC-0137 / 2024-26-0461	Post Flight Simulation of Dynamic Responses at the Satellite Interface of a Typical Launch Vehicle During Solid Motor Ignition Raji R, Jancy Rose, Vikram Sarabhai Space Centre
03:20 – 03:40 PM	Oral	24AC-0260	Unsteady Flow Phenomena in Supersonic Retropropulsion Jets Sai Prasad Mohanty, Subrahmanyam Duvvuri, Indian Institute of Science

D1H2S1: Materials, Structures & Manufacturing Track - Hall 2 – 9 AM to 10:40 AM – 6th June

Track Chairs	• Prof. R Gangadharan, IIT Hyderabad • Dr. Dheepa Srinivasan, Pratt & Whitney
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Invited		Invited Talk by Dr Dheepa Srinivasan , Chief Engineer – Pratt & Whitney
09:20 – 09:40 AM	Paper	24AC-0084 / 2024-26-0414	Aero-Engine Fastened Structural Components: An Investigation into Impact Induced Three-Dimensional Dynamic Fracture Mechanism Shatrughan Singh, Debiprosad Roy Mahapatra, Indian Institute of Science
09:40 – 10:00 AM	Paper	24AC-0231 / 2024-26-0415	Multi-Scale Modeling of Selective Laser Melting Process Aditya Varma, Kona Veera Ganesh, Debiprosad Roy Mahapatra, Indian Institute of Science
10:00 – 10:20 AM	Paper	24AC-0206 / 2024-26-0416	Generating Reduced-Order Image Data and Detecting Defect Map on Structural Components using Ultrasonic Guided Wave Scan Ganesh Kolappan Geetha, Indian Institutes of Technology; Nitin. B Ravi, Debiprosad Roy Mahapatra, Indian Institutes of Science
10:20 – 10:40 AM	Oral	24AC-0198 / 2024-26-0417	Buckling Knockdown Factor Estimation of Stiffened Cylinders under Combined Loads - A Numerical Study Santhosh Ramarathnam, Indian Institutes of Technology; Prakash Chand Jain, DRDO; Gangadharan Raju, Indian Institutes of Technology

D1H2S2: Materials, Structures & Manufacturing Track - Hall 2 – 2 PM to 03:40 PM – 6th June

Track Chairs	• Prof. R Gangadharan, IIT Hyderabad • Dr. Dheepa Srinivasan, Pratt & Whitney
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited		Invited Talk by Geroge DSA, Airbus India
02:20 – 02:40 PM	Invited		Invited Talk by Prof M Ramji, IIT Hyderabad
02:40 – 03:00 PM	Paper	24AC-0157 / 2024-26-0418	Buckling and Post-Buckling Response of 3D Printed Cylindrical Shell with Circular Cutout under Axial Compression Vineeth Ravulapalli, Gangadharan Raju, Ramji Manoharan, Indian Insitute of Technology, Hyderabad; Vijayabaskar Naryanamurthy, Research Centre Imarat
03:00 – 03:20 PM	Paper	24AC-0244 / 2024-26-0419	Design and Manufacturing of an Inclinator Sensing Element for Launch Vehicle Applications Tony M Shaju, Nirmal Krishna, G Nagamalleswara Rao, T Suresh Kumar, Pradeep K, Indian Space Research Organization
03:20 – 03:40 PM	Paper	24AC-0222 / 2024-26-0420	Selective Laser Melting Based Additive Manufacturing Process Diagnostics Using In-Line Monitoring Technique and Laser-Material Interaction Model Benjamin Raju, Kishore Babu Kancherla, Dakshayini B S, Debiprosad Roy Mahapatra, Indian Institute of Science

D1H2S3: Materials, Structures & Manufacturing Track - Hall 2 – 4 PM to 05:40 PM – 6th June

Track Chairs	• Prof. R Gangadharan, IIT Hyderabad • Dr. Dheepa Srinivasan, Pratt & Whitney
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
04.00 - 04.20 PM	Invited		Invited Talk by Dr Ramesh Kumar, ACD Head, NAL
04:20 – 04:40 PM	Paper	24AC-0220 / 2024-26-0421	A Methodology for Accelerated Thermo-Mechanical Fatigue Life Evaluation of Advanced Composites Kishore Babu Kancherla, Dakshayini B S, Benjamin Raju, Debiprosad Roy Mahapatra, Indian Institute of Science
04:40 – 05:00 PM	Paper	24AC-0245 / 2024-26-0422	Thermal Analysis of Prismatic Core Sandwich Structural Panel for Hypersonic Application Ragini Mukherjee; Debiprosad Roy Mahapatra
05:00 – 05:20 PM	Paper	24AC-0196 / 2024-26-0423	Analytical and Experimental Evaluation of Seal Drag Force for Different Fluids Makrand Yarolkar, Milind Telore, Sandip Patil, Eaton India Innovation Center
05:20 – 05:40 PM	Oral	24AC-0263	Nonlinear Waves in Multistable Magnetoelastic Lattices Samanvay Anand, Anusree Ray, Vivekanand Dabade, Rajesh Chaunsali, Indian Institute of Science

D2H2S1: Materials, Structures & Manufacturing Track - Hall 2 – 9 AM to 10:40 AM – 7th June

Track Chairs	• Prof. R Gangadharan, IIT Hyderabad • Dr. Dheepa Srinivasan, Pratt & Whitney
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Invited		Invited Talk by Prof. K. Padmanabhan , Vellore Institute of Technology, Vellore
09:20 – 09:40 AM	Paper	24AC-0150 / 2024-26-0427	The Effect of Excessive Thermo-Mechanical Stress on the Performance of High-Pressure Hose Assemblies Used under Flexing Motion Abhilash Neve, Sandip Patil, Eaton India Innovation Center
09:40 – 10:00 AM	Paper	24AC-0109 / 2024-26-0428	Elastomeric Swaging Finite Element Analysis Methodology to Evaluate Structural Integrity of Internal Swaged Joints Taranjeet Sandhu, Ravi Aher, Eaton India Innovation Center; Ravi Soni, Eaton Corporation; Nikhil Barsawade, Swapnil Kamthe, Eaton Aerospace Group; Vijay Sajjan Phalle, Eaton India Innovation Center
10:00 – 10:20 AM	Oral	24AC-0311	Low-frequency Vibration Isolation using Bandgap Metamaterials Garigipati Sai Srikanth, Murthaza Irfan A V, K Prabith, Rajesh Chaunsali, Indian Institute of Science
10:20 – 10:40 AM			Invited talk by Speaker from Boeing

D2H2S2: Materials, Structures & Manufacturing Track - Hall 2 – 2 PM to 03:40 PM – 7th June

Track Chairs	• Prof. R Gangadharan, IIT Hyderabad • Dr. Dheepa Srinivasan, Pratt & Whitney
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited		Invited Talk by Prof. V. Raghuprakash, IITM
02:20 – 02:40 PM	Paper	24AC-0091 / 2024-26-0430	A Multi-Scale Computational Scheme for Prediction of High-Cycle Fatigue Damage in Metal Alloy Components Ravi Kumar, Karan D S, Debiprosad Roy Mahapatra, Indian Institute of Science
02:40 – 03:00 PM	Paper	24AC-0111 / 2024-26-0431	Effect of Fatigue Loads on behavior of 2024 Aluminum for Aircraft Hydraulic Applications Vishal Paidimarri, Krupa Jacob, Uppu Harish, Eaton India Innovation Center; David Hovis
03:00 – 03:20 PM	Paper	24AC-0080 / 2024-26-0429	FE Modelling and Experimental Evaluation for the Surface Integrity of Thin-Walled Aluminum Alloy Makrand Yarolkar, Uppu Harish, Sandip Patil, Manasi Patil, Eaton India Innovation Center
03:20 – 03:40 PM			

D1H3S1: Aerospace Systems Engineering Track - Hall 3 – 9 AM to 10:40 AM – 6th June

Track Chairs	• Mr. Adishesha C S, Collins Aerospace • Dr. V. Sudhakar, ADA
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Paper	24AC-0228 / 2024-26-0462	Automatic Maneuver Detection in Flight Data using Wavelet Transform and Deep Learning Algorithms Pratik Parihar, Utsav Kumar, National Institute of Technology; Dushyant Kaliyari, Khadeeja Nusrath Tk, National Aerospace Laboratories
09:20 – 09:40 AM	Paper	24AC-0052 / 2024-26-0463	Synergized Mixed-Signal System-on-Chip (SoC) Design and Development using System-level Modeling and Simulation G Savithri, T Saritha, M Bindu Bhargavi, BS Teza, Sushma Poreddy, M Madhava Kumar, G Vijaya Durga, Usha P Verma, DRDO; Kishore Siddani, Vidya Viswanathan, MathWorks, Inc.
09:40 – 10:00 AM	Paper	24AC-0019 / 2024-26-0464	A Non-Intrusive Approach for Measuring Data and Control Coupling b/w Software Components: Addressing the Challenges of DO-178C Compliance, Verification and Certification Yogesha Aralakuppe Ramegowda, Honeywell India Inc.
10:00 – 10:20 AM	Paper	24AC-0024 / 2024-26-0466	CFD Methodology Development to Predict Lubrication Effectiveness in Electromechanical Actuators Divyanshu Bhardwaj, Anant Kumar, Jubin George, Eaton India Innovation Center
10:20 – 10:40 AM	Oral	24AC-0172	The Need for Smarter Testing & Simulation of Airframe Structural Fatigue Shahul Nazar, Airbus India

D1H3S2: Avionics Systems Track - Hall 3 – 2 PM to 03:40 PM – 6th June

Track Chairs	• Prof. Ashwini Ratnoo, IISc • Dr. Yogananda Jeppu, Honeywell
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited		Invited Talk by Mr Gaurav Dubey, MathWorks
02:20 – 02:40 PM	Paper	24AC-0236 / 2024-26-0432	High Frequency Unsteady Pressure Measurement System for Aerodynamic Characterization Rekhanshi Varma, Vidya SB, Deepak Jogi, Nandakishor MM, Finitha KC, Vikram Sarabhai Space Centre
02:40 – 03:00 PM	Paper	24AC-0116 / 2024-26-0433	BIST Based Method for SEE Testing of Vikram1601 Processor Dominic George Joseph, Joji Daniel, Padmakumar K, Jayalekshmy L, Athula Devi, Vikram Sarabhai Space Centre
03:00 – 03:20 PM	Paper	24AC-0173 / 2024-26-0434	Single Board Computer Based Data Acquisition System for Monitoring Parameters of Reusable Launch Vehicle Interface System Manu C, Eagam Vinay Kumar, Abbireddy Gurusivanjaneya, Indian Space Research Organisation; Vivekanand V, Vikram Sarabhai Space Centre
03:20 – 03:40 PM	Paper	24AC-0250 / 2024-26-0435	A CDMA Based Approach for QoS Improvement in Intra-Aircraft Wireless Sensor Networks (IAWSN) Adishesha C S, Prasanna Ramamurthy, Collins Aerospace; Kumardeb Banerjee, Mridul Sankar Barik, Jadavpur University

D1H3S3: Aerospace Systems Engineering Track - Hall 3 – 4 PM to 05:40 PM – 6th June

Track Chairs	• Mr. Adishesha C S, Collins Aerospace • Dr. V. Sudhakar, ADA
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
04.00 - 04.20 PM	Invited		Invited Talk by Dr. N. Munikrishna , CTO, S&I Engineering Solutions Pvt. Ltd.
04:20 – 04:40 PM	Invited		Invited Talk by Mr. Suresh Padmanabhan , Collins Aerospace
04:40 – 05:00 PM	Paper	24AC-0106 / 2024-26-0467	Comparative Analysis of Axial Flux and Radial Flux Motors for UAV Propulsion: Design and Suitability Assessment Carunaiselvane C, Rajesh Kumar, REUDE Technologies
05:00 – 05:20 PM	Paper	24AC-0059 / 2024-26-0468	Hybrid Cooling System for Thermal Management in Electric Aerial Vehicles Vinayak Nyamagoudar, Namratha P R, Madireddy Balasubrahmanyam, Sridhar Vanka, Raghavendra Gattu, Honeywell Technology Solutions; Ahmed Abuheiba, Honeywell Rocky Research; Rajesh Kumar Jha, Honeywell Technology Solutions
05:20 – 05:40 PM	Paper	24AC-0178 / 2024-26-0469	Study of Crew Seat Impact Attenuation System for Indian Manned Space Mission Nohin K Avirah, Dasu Deva Karthik Lakshman, Sai Santhosh Potnuru, Athul P Pramod, Sabin Kurian, Vikram Sarabhai Space Centre

D2H3S1: Avionics Systems Track - Hall 3 – 9 AM to 10:40 AM – 7th June

Track Chairs	• Prof. Ashwini Ratnoo, IISc • Dr. Yogananda Jeppu, Honeywell
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Invited		Invited Talk by Speaker from Moog
09:20 – 09:40 AM	Paper	24AC-0115 / 2024-26-0436	Development of an Autonomous Blimp (Airship) for Indoor Navigation Syam Narayanan S, Yogesh Gangurde, Hitesh Marella, Thivya Rannee, P Rajalakshmi, NMICPS TiHAN, IITH
09:40 – 10:00 AM	Paper	24AC-0200 / 2024-26-0438	Design and Development of Terminal Velocity Measurement System for Descending Modules Gayathri Girish, Smitha KS, Rizwana M P, Anand K, Vikram Sarabhai Space Centre
10:00 – 10:20 AM	Paper	24AC-0253 / 2024-26-0439	Aircraft Weather Data Representation and Threat Management for Connected Weather Applications Prasanna Ramamurthy, Balraj Gangadhar, Sathiyaseelan Thulasidass, Collins Aerospace
10:20 – 10:40 AM	Paper	24AC-0046 / 2024-26-0440	Analysis of Possible Flight Operational Cost Savings by Automating Weather Forecast Updates Dinesh Kushwaha, Sebin K Kottackal, Collins Aerospace

D2H3S2: Aerospace Systems Engineering Track - Hall 3 – 2 PM to 03:40 PM – 7th June

Track Chairs	• Mr. Adishesha C S, Collins Aerospace • Dr. V. Sudhakar, ADA
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited		Invited talk by Dr Subhrakanti Das, Thales
02:20 – 02:40 PM	Invited		Invited Talk by Dr Yogananda Jeppu , Fellow – Honeywell Aerospace
02:40 – 03:00 PM	Paper	24AC-0113 / 2024-26-0470	Stochastic Finite Element Formulation of a Three-Node Quadratic Bar Element with Non-Uniform Cross-Section Based on the Perturbation Method for Simultaneously Non-Deterministic Elastic Modulus and Applied Load Aakash Dhar Dwivedi, R Marimuthu, Vikram Sarabhai Space Centre
03:00 – 03:20 PM	Paper	24AC-0232 / 2024-26-0471	Formal Technique for Fault Detection and Identification of Control Intensive Application of Stall Warning System using System Theoretic Process Analysis Alexander Kale, Ganesh Madhuranath, Viswanathan Shanmugham, Manju Nanda, Giresh Singh, National Aerospace Laboratories; Umut Durak, German Aerospace Center (DLR)
03:20 – 03:40 PM	Oral	24AC-0252	Numerical Simulation and Experimental Verification of Response of a Pneumatically Operated Valve Renjith James, Aerospace

D1H4S1: Sustainability & Circularity Track - Hall 4 – 9 AM to 10:40 AM – 6th June

Track Chairs	• Dr. G.N. Dayananda, (Retd.) CSIR/NAL • Prof. Sivakumar Deivendran, IISc
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Invited		Invited Talk by Dr G N Dayananda; Retired from Council Of Scientific & Industrial Research
09:20 – 09:40 AM	Invited		Invited Talk by K. Shambayya, Deputy Director. LPSC Bangalore, ISRO
09:40 – 10:00 AM	Paper	24AC-0035 / 2024-26-0402	Sustainable Microalgae-Membrane Photobioreactor System for Onboard Oxygen Production in an Aircraft Shreesha Subrahmanya, Naveen Kumar, Jayant Ranjan, Shivaprasad Kotnadh, Honeywell Technology Solutions Lab
10:00 – 10:20 AM	Paper	24AC-0004 / 2024-26-0403	Energy Consumption in Lightweight Electric Aircraft Amogha Kanchagar, Collins Aerospace
10:20 – 10:40 AM	Paper	24AC-0134 / 2024-26-0405	Consensus Based Air Transport System for Strategic Deconfliction for Urban Air Mobility Sreenivasan KG, SunilRaj Suseelan, Pradeep Huncha, Honeywell Technology Solution Lab

D1H4S2: New Technologies Integration Track - Hall 4 – 2 PM to 03:40 PM – 6th June

Track Chairs	• Prof. Suresh Sundaram, IISc • Dr. Savitha Ramasamy, I2R/A*STAR
Host	• <<SAE AeroForum>>

Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited	Invited	Invited Talk by Speaker from Infosys
02:20 – 02:40 PM	Paper	24AC-0310 / 2024-26-0473	Fault Detection in Machine Bearings Using Deep Learning A. Vaishnavi; Anju Sharma; VPS Naidu
02:40 – 03:00 PM	Paper	24AC-0183 / 2024-26-0474	Using Generative Models to Synthesize Multi-Component Asset Images for Training Defect Inspection Models Ujwal Bhate, Ashish Jha, Vijayasri Kalyan, Rahul Gupta, Ninad Kulkarni, Infosys Limited
03:00 – 03:20 PM	Paper	24AC-0066 / 2024-26-0478	Deep Learning-Based Digital Twinning Models for Inter System Behavior and Health Assessment of Combat Aircraft Systems Ankur Agrawal, Aeronautical Development Agency; Fahad Farid, Indian Institute of Technology; Aniruddh Prabhu, Veluri Sudhakar, Aeronautical Development Agency; Nalinaksh Vyas, Indian Institute of Technology
03:20 – 03:40 PM			

D2H4S1: Sustainability & Circularity Track - Hall 4 – 9 AM to 10:40 AM – 7th June

Track Chairs	• Dr. G.N. Dayananda, (Retd.) CSIR/NAL • Prof. Sivakumar Deivendran, IISc
Host	• << SAE AeroForum>>

Time	Category	ID#	Title & Authors
09.00 - 09.20 AM	Invited		Invited Talk by Harish H V; Managing Director, ECube Investment Advisors Pvt Ltd
09:20 – 09:40 AM	Invited		Invited Talk by Speaker from Infosys
09:40 – 10:00 AM	Paper	24AC-0223 / 2024-26-0407	Assessing the Structural Feasibility and Recyclability of Flax/PLA Bio-Composites for Enhanced Sustainability Dakshayini B S, Kishore Babu Kancherla, Benjamin Raju, Debiprosad Roy Mahapatra, Indian Institute of Science
10:00 – 10:20 AM	Paper	24AC-0013 / 2024-26-0408	Study of Different Designs of Chevron for Effective Noise Reduction in Jet Engines Shri Hari S, Karthik M C Rao, VIT Bhopal University
10:20 – 10:40 AM	Paper	24AC-0152 / 2024-26-0410	Ensuring Zero Defects Through Effective Design Failure Modes and Effects Analysis Processes in the Aerospace Industry Achint Shah, Moog India Technology Center Pvt Ltd.; Rachelle Shea, Bruce Siskowski, Moog Aircraft Group

D2H4S2: New Technologies Integration Track - Hall 4 – 2 PM to 03:40 PM – 7th June

Track Chairs	• Prof. Suresh Sundaram, IISc • Dr. Savitha Ramasamy, I2R/A*STAR
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Time	Category	ID#	Title & Authors
02.00 - 02.20 PM	Invited		Invited Talk by Speaker from Boeing
02:20 – 02:40 PM	Paper	24AC-0251 / 2024-26-0480	Inverse Approach for Metasurface Based Radar Absorbing Structure Design for Aerospace Applications Using Machine Learning Techniques Anjana P K, College of Engineering Trivandrum; Abhilash P V, Siddharth Bisariya, Vijay Kumar Sutrakar, ADE, DRDO
02:40 – 03:00 PM	Paper	24AC-0283 / 2024-26-0483	Aerospace Vehicle Motion Simulation with Real-Time Telemetry Data Sandeep Prasad Shaw, Adarsh Thakur, Thara Nair, Raveendra KK, Vikram Sarabhai Space Centre
03:00 – 03:20 PM	Paper	24AC-0141 / 2024-26-0484	Velocity Estimation of a Descending Spacecraft in Atmosphereless Environment Using Deep Learning Jayanth Balaji Avanashilingam, Satish Thokala, MathWorks, In
03:20 – 03:40 PM	Oral	24AC-0076	ML based Predictive model for Mechanical Behavior of Cellular Structured Super alloys Prachi Khullar, Srijith Pillai, Honeywell

Thank You