



First International Conference on
Advanced Air Mobility Systems
ICAAMS-1



A Joint Initiative
(VFS and RWSI)

COMMEMORATION OF JOINT SILVER JUBILEE
VFS AUSTRALIA CHAPTER
ROTARY WING SOCIETY OF INDIA

Presenting

ICAAMS-1

Conference & Workshop Program and Sponsorships

4-6 Dec 23

Airforce Station, Yelahanka

Bengaluru – India

Supported by





A joint initiative by Vertical Flight Society (VFS) International Asia Australia Region and Rotary Wing Society of India (RWSI) under support of VFS International (Australia Chapter)

It will pioneer a holistic forum on
Advanced Air Mobility System (AAMS)

The International Conference on Advanced Air Mobility System **ICAAMS**

The forum will address all subdisciplines of Aerospace and Aviation. Coverage is from design development to operations, product support, regulations and on to airspace management.

The Inaugural conference ICAAMS-1 has been limited to a “Single Session and Workshop” format to enhance closer interaction during the three-day program.

The keynote presentations and workshop have been specifically designed to address four strategic issues and challenges of an AAMS

ICAAMS -1 is an opportunity to **Set-the-Scene** for the ICAAMS series of forums in the Asia Australia Region

So, join in as a delegate or sponsor to be part of it.

Organising Committee



Monday - 4 Dec 23

Time	Activity	Presenter/Authors
0800-0815	All Keynote and Paper Presenters Briefing	Ananth Srinivas, Coordinator-in-Chief
0815-0830	Day 1 - Conference Introductory Briefing	Vijaya Kumar Mudubagilu, Deputy Chair
0830-0845	Welcome Address to Country, and Airforce Station	Air Chief Marshal FH Major, Air Cmde R Vijaydev
0845-0900	Conference Opening Address	Arvind Sinha, Chair & VP Asia Australia VFS
0900-0930	VFS and RWSI Address	Director Strategy VFS and President RWSI
0930-1000	Melbourne University and IISc Address	Jason Monty and SN Omkar
1000 - 1030	Keynote 1– Technology Status and Updates	Saleem Zaheer – XTI Aircraft, USA
1030-1100	Tea/Coffee/Drinks/Networking	
Session 1 – Airspace Management <i>Chair: Salim Mousallam, GE Aerospace, UAE</i>		
1100-1130	UAM integration with existing airports	Amit Ganjoo, Brent Klavon & Sanuj Mittal
1130-1200	Use of Advances in Technology for Air Traffic Management of UAMs	AK Sachdev
1200-1330	Lunch & Networking	
1330-1400	Keynote 2 – Safety Regulation Status Updates	James Viola, Helicopter Association International
Session 2 – Airworthiness and Regulations <i>Chair: Somen Choudhury, Canada</i>		
1400-1430	eVTOL Certification – Regulatory Approach and Safety Considerations	Sanjay Gattani
1430-1500	Development of Standardization Framework for UAV Airworthiness in Thailand	Sitthitharanon K, Tiandum J, Tantrairatn S, Pichitkul A, Mr Ariyarit A & Mr Pittayachaval P.
1500-1530	Tea/Coffee/Drinks/Networking	
Session 3 – Design 1 <i>Chair: JVR Prasad – Georgia Institute of Technology, USA</i>		
1530-1600	Design and Development of Hybrid eVTOL UAV for Humanitarian Aid Mission (eVUHAM)	Rahul Jaiswal, Nouman Uddin & S N Omkar
1600-1630	Evolution of Interchangeable Main Rotor Blades: An HAL Perspective	K Sravan Kumar, Vineeth Kumar C Dr KR Prashanth & Nagarajan R
1630-1645	Vote of Thanks	BS Singh Deo, Technical Chair
1645-1650	Day 1 – Closing Remarks	Vijaya Kumar Mudubagilu, Dy Chair ICAAMS-1
1930-2000	Keynote 3 - Advanced Air Mobility - Way Ahead	James Wang, Nanyang University, Singapore
2000-2200	Conference and RWSI & VFS (Aus Chapter) Silver Jubilee and Banquet & Awards	

Tuesday - 5 Dec 23

Time	Activity	Presenter/Authors
0800-0805	Day 2- Conference Introductory Briefing	Vijaya Kumar Mudubagilu, Dy Chair ICAAMS-1
0805--0845	Keynote 3– Research & Innovation – Joint Updates	F Gandhi, Rensselaer Polytechnic Institute, USA
Session 4 – Propulsion and Structures & Materials		
Chair: Dineshkumar Harursampath – Indian Institute of Science, India		
0845-0915	Hybrid Propulsion of a Cargo VTOL Aircraft	Richard P. Anderson & Jeffrey R. Lewis
0915-0945	Use of Thermoplastics and Advanced Manufacturing Techniques for Low Weight Solution and High Tate Production of UAM eVTOLs	Evan Young & Sanjay Gattani
0945-1015	Tea/Coffee/Drinks/Networking	
Session 5– Aerodynamics 1		
Chair: Auraluck Pichitkul - Suranaree University of Technology, Thailand		
1015-1045	Aerodynamic Effect of Rain on Quadrotor Performance	Aishwerya Gahlot & Lakshmi N. Sankar
1045-1115	Rotor Inflow Models for UAM Applications	J.V.R. Prasad, Jahnvi Hariani & David A. Peters
1115-1145	Stochastic Aeroelastic Stability of Distributed Electric Propulsion Wing	Senthil Murugan & Ms Snighdha
1145-1315	Lunch and Networking	
1315-1345	Keynote 4 – Airspace Management- Joint Updates	To be advised
Session 6 – Systems and Design 2		
Chair: Lakshmi Sankar – Georgia Institute of Technology, USA		
1345-1415	Deep learning based Virtual Sensor for Low Airspeed Measurement	Rahul & Tittu George
1415-1445	Positioning of the Main Rotor Actuators for a helicopter with dynamic swash plate phasing	K Sravan Kumar, Vineeth Kumar C
1445-1515	Tea/Coffee/Drinks/Networking	
Session 7 – Aerodynamics 2		
Chair: SN Omkar, Indian Institute of Science, India		
1515-1545	Design and Analysis of Efficient Low Noise eVTOL Rotors	Auraluck Pichitkul & Lakshmi N. Sankar
1545-1615	Control Equivalent Turbulence Input Models for UAM Applications	J.V.R. Prasad & Mahmoud Hayajnh
1615-1645	Conference Panel Discussions	Industry, Academia, Regulator & Independent
1645-1700	Vote of Thanks	BS Singh Deo, Technical Chair
1700-1715	Day 2 – Closing Address	Vijaya Kumar Mudubagilu, Deputy Chair

Workshop

Enhancing Future VTOL (AAM) usage in Indian Airspace

Today, India has 254 operational civil helicopters, less than the number flying in many cities around the world. The number of active civil helicopters has decreased by 18% over the past decade (2012-2022). The skies in India have not been adequately exploited by helicopters considering the size of the country and its economy. Hence, the benefits of vertical takeoff of landing (VTOL) aircraft largely remain inaccessible to the world's largest democracy and the fifth largest economy.

The Workshop will explore the many reasons for this and discuss strategies to address the situation. It aims to provide a platform to all stakeholders from the field of research & development to manufacturers, regulators, operators, and other leaders in the industry to discuss the present status of limited use of the helicopters in India and its associated issues and challenges.

As future Advanced Air Mobility (AAM) aircraft are likely to share the airspace with helicopters and are likely to be operated under similar regulations, the present problems facing the helicopter industry are likely to be carried forward to future AAM operations. The Workshop will discuss how we can ensure the smooth induction and operationalization of the new platforms while ensuring that the regulatory and operational hurdles are overcome to allow AAM to fulfill its promise as a gamechanger for society.

The Workshop will also highlight the global status of the efforts by various stakeholders in AAM. This includes the design and development, standards & certification, airspace management and operationalization of the AAM platforms. The Workshop will also discuss the challenges which the industry is likely to face as we embrace new concepts and technology.

The outcome of the Workshop will help generate ideas to develop an "AAM Roadmap" for India in the immediate future by the relevant authorities to enhance the usage of not only its present helicopter fleet, but also the expected introduction of AAM platforms.

Time	Activity	Presenter/Authors
0900-0915	Workshop Welcome Address	Vijaya Kumar Mudubagilu, Dy Chair ICAAMS-1
0915-0930	Workshop Introductory Briefing	Mike Hirschberg, Director Strategy VFS
0930-1030	Workshop Session 1	
1030-1100	Tea/Coffee/Drinks Break	
1100-1200	Workshop Session 2	
1200-1245	Meetings and Lunch	
1245-1330	Workshop Panel Discussions	Mike Hirschberg, Director Strategy VFS
1330-1500	VFS/RWSI Meetings	
1500-1530	Tea/Coffee/Drinks Break	

CONFERENCE BANQUET AND AWARDS

In Commemoration of Joint Silver Jubilee

VFS Australia Chapter and Rotary Wing Society of India

Monday - 4 Dec 23: Evening

Time	Activity	Presenter/Organiser
1900-1930	Welcome Drinks	Conference Organising Team
1930-1945	VFS and RWSI - History and Status Video	VFS and RWSI
1945-2000	Course 1 – Entrees/Snacks	Officers Mess Staff
2000-2010	Joint Study – Advance Air Mobility Systems	Melbourne Uni & IISc Collaboration
2010-2030	VFS and RWSI Awards	VFS and RWSI
2030-2100	Course 2 - Dinner	Officers Mess Staff
2100-2115	ICAAMS 1 to ICAAMS 2 - Handing Taking Over	India to Singapore
2115-2200	Course 3 - Desert and Networking	Officers Mess Staff/Delegates





ICAAMS -1

Organising Team



Chair	: Arvind Sinha, <i>Melbourne University, Australia</i>
Deputy Chair	: Vijaya Kumar Mudubagilu, <i>Rotary Wing Society of India, India</i>
Technical Chair Aerospace	: Robert Hood, <i>Vertical Flight Society International, Australia</i>
Technical Chair Aviation	: BS Singh Deo, <i>Rotary Wing Society of India, India</i>
Executive Committee	: AS Butola, <i>Rotary Wing Society of India, India</i> : BS Singh Deo, <i>Rotary Wing Society of India, India</i> : Vijaya Kumar Mudubagilu, <i>Rotary Wing Society of India, India</i> : Arvind Sinha, <i>Vertical Flight Society International, Australia Chap</i> : Robert Hood, <i>Vertical Flight Society International, Australia Chap</i>
Industry Advisors	: V Sadagopan, <i>Former CEO, Helicopter Complex, HAL, India</i> : R K Narang, <i>Author, Drone and Aviation Policy Analyst, India.</i> : Aman Johri, <i>Jatayu Unmanned Technologies Private Ltd, India</i>
Technical Review Subcommittee	: KC Wong, <i>Sydney University, Australia</i> : Raman Singh, <i>Monash University, Australia</i> : JVR Prasad, <i>Georgia Tech, USA</i> : Farhan Gandhi, <i>Rensselaer Polytechnic Institute, USA</i> : James Wang, <i>Nanyang Tech University, Singapore</i> : Auraluck Pichitkul, <i>Suranaree University, Thailand</i> : Wan Mazlina, <i>Universiti Teknologi Mara, Malaysia</i> : Yasutada Tanabe, <i>Japan Aerospace Exploration Agency, Japan</i> : Sang Joon Shin, <i>Seoul National University, South Korea</i> : Salim Mousallam, <i>GE Aerospace, UAE</i> : C Venkatesan, <i>Indian Institute of Technology, Jodhpur, India</i> : Abhishek, <i>Indian Institute of Technology, Kanpur, India</i> : Senthil Murugan, <i>Indian Institute of Technology, Madras, India</i> : S N Omkar, <i>Indian Institute of Science, Bengaluru, India</i> : Suresh Sundaram, <i>Indian Institute of Science, Bengaluru, India</i> : Prashant K R, <i>Rotary Wing R & D Centre, HAL, Bengaluru, India</i>
Coordinator-in-Chief	: Ananth Srinivas, <i>Vertical Flight Society International, India Chap</i>
Secretariate	: Kalpana Dhar, <i>Rotary Wing Society of India, India</i> : Betty Chen, <i>Vertical Flight Society International, USA</i> : Rajat Misra, <i>Rotary Wing Society of India, India</i>

Sponsorship levels/events

	Platinum	Gold	Silver	Lunch/Dinner	Tea	Advertisement
INR	5,00,000 + 18% GST	3,00,000 + 18% GST	2,00,000 + 18% GST	1,00,000 + 18% GST	50,000 + 18% GST	50,000 + 18% GST
Or US\$	7,000 inclusive of tax	4,500 inclusive of tax	3,000 inclusive of tax	-	-	-

Sponsorships benefits

	Platinum	Gold	Silver	Lunch or Dinner	Tea
Free Delegates at the Event	20	15	10	10	5
Corporate Logo on Delegate Folder	✓	✓	✓	✓	✓
Corporate Logo on Conference Brochure	✓	✓	✓		
Corporate Logo on Conference Hall Screen	✓	✓	✓	✓	✓
Corporate Logo on Delegate Name Badges	✓	✓			
Corporate Logo on Thank You Sponsors Panel	✓	✓	✓	✓	✓
Acknowledgment at Lunch/Dinner Venue	✓	✓		✓	
Acknowledgment at Tea Venue	✓	✓			✓
Colour Advertisement in Conference Brochure	1 Page	1 Page	½ Page	½ Page	½ Page
Signages in Reception Area	✓	✓			

Contact to process Sponsorships: Phone: 0120-4252346, 4252347, Telefax: 0120-6870876
Email: office@rws.org

Silver Jubilee Message – President Rotary Wing Society of India

Having commenced with few helicopter veterans in 1998 from a garage, 'Rotary Wing Society of India (RWSI)' has grown several folds and today represents most of the helicopter industry with over 1300 life members and 189 corporate members. It has been recognized as a major stake holder in the industry and has responsibly held the status of the nodal agency for all issues related to helicopters industry. We are also a member of IFHA, HAI and VAST and work together to implement the safety initiatives. As we have grown, we have also added the fast-emerging drone industry to our charter and have been working with several stake holders and the regulator to address the issues.

As we complete 25 years in the service of the industry, we take pride in the selfless voluntary service provided by our members to the industry in furtherance of safety and streamlining of the policies.

First International Conference on Advanced Air Mobility Systems (ICAAMS) has been planned to get the stake holders together who are at the cusp of transforming the Indian skies and change the way we think and commute.

This Conference is in Commemoration of our Silver Jubilee, and we hope it will go a long way in giving a boost to our efforts to synergize the industry