



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	Day 1 - Conference Introductory Briefing	Vijaya Kumar Mudubagilu, Dy Chair ICAAMS-1
0815-0830	Welcome Address to Country, and Airforce Station	Air Chief Marshal FH Major, Air Cmde .....
0830-0845	Conference Opening Address	Arvind Sinha, Chair ICAAMS 1
0845-0915	VFS and RWSI Address	Director Strategy VFS and President RWSI
0915-0930	Melbourne University and IISc Address	Jason Monty and SN Omkar
0930 - 1030	<b>Keynote 1– Technology Status and Updates</b>	Salim Zaheer – XTI Aircraft, USA
<b>1030-1100</b>	<b>Tea/Coffee/Drinks/Networking</b>	Sponsored by TBA
<b>Session 1 – Airspace Management</b> <i>Chair: TBA</i>		
1100-1130	UAM integration with existing airports	Amit Ganjoo, Brent Klavon & Sanuj Mittal
1130-1200	Ongoing advances in technology and thought move towards finding solutions that work	AK Sachdev
<b>1200-1330</b>	<b>Lunch &amp; Networking</b>	Sponsored by TBA
1330-1400	<b>Keynote 2 – Safety Regulation Status Updates</b>	James Viola, President HAI
<b>Session 2 – Airworthiness and Regulations</b> <i>Chair: TBA</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.
<b>1500-1530</b>	<b>Tea/Coffee/Drinks/Networking</b>	Sponsored by TBA
<b>Session 3 – Design 1</b> <i>Chair: JVR Prasad – Georgia Institute of Technology, USA</i>		
1530-1600	Design of a Versatile UAV for Emergency Medical Services (EMS)	C Rudraswamy, Sharath Ravi, Kshamith Alva K S N Omkar & Hemant Sharma
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	Technical Chair
1645-1650	Day 1 – Closing Remarks	Vijaya Kumar Mudubagilu, Dy Chair ICAAMS-1
<b>1930-2000</b>	<b>Keynote 3 - Advanced Air Mobility - Way Ahead</b>	James Wang, Nanyang University, Singapore
<b>2000-2200</b>	<b>Conference and RWSI &amp; VFS (Aus Chapter) Silver Jubilee and Banquet &amp; Awards</b>	Sponsored by TBA

TBA: To be advised.

## Tuesday - 5 Dec 23

Time	Activity	Presenter/Authors
0800-0815	Day 2- Conference Introductory Briefing	Vijaya Kumar Mudubagilu, Dy Chair ICAAMS-1
0815--0845	<b>Keynote 4 – Airspace Management- Joint Updates</b>	Government - TBA
<b>Session 4 – Propulsion and Structures &amp; Materials</b> Chair: Dineshkumar Harursampath – Indian Institute of Science		
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 Tare Production of UAM eVTOLs	Evan Young & Sanjay Gattani
<b>0945-1015</b>	<b>Tea/Coffee/Drinks/Networking</b>	Sponsored by TBA
<b>Session 5– Aerodynamics 1</b> 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 Snigdha
<b>1145-1315</b>	<b>Lunch and Networking</b>	Sponsored by TBA
1315-1400	<b>Keynote 5– Research &amp; Innovation – Joint Updates</b>	F Gandhi, Rensselaer Polytechnic Institute, USA
<b>Session 6 – Systems and Design 2</b> Chair: Lakshmi Sankar – Georgia Institute of Technology		
1400-1430	Deep learning based Virtual Sensor for Low Airspeed Measurement	Rahul & Tittu George
1430-1500	Positioning of the Main Rotor Actuators for a helicopter with dynamic swash plate phasing	K Sravan Kumar, Vineeth Kumar C
<b>1500-1530</b>	<b>Tea/Coffee/Drinks/Networking</b>	Sponsored by TBA
<b>Session 7 – Aerodynamics 2</b> Chair: Raman Singh, Monash University, Australia		
1530-1600	Design and Analysis of Efficient Low Noise eVTOL Rotors	Auraluck Pichitkul & Lakshmi N. Sankar
1600-1630	Control Equivalent Turbulence Input Models for UAM Applications	J.V.R. Prasad & Mahmoud Hayajneh
1630-1645	Conference Panel Discussions	Industry, Academia, Regulator & Independent
1645-1700	Vote of Thanks	Technical Chair
1700-1715	Day 2 – Closing Address	Vijaya Kumar Mudubagilu, Dy Chair

TBA: To be advised.

## 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	<b>Workshop Introductory Briefing</b>	Mike Hirschberg, Director Strategy VFS
0930-1030	Workshop Session 1	TBA
<b>1030-1100</b>	<b>Tea/Coffee/Drinks Break</b>	Sponsored by TBA
1100-1200	Workshop Session 2	TBA
<b>1200-1245</b>	<b>Meetings and Lunch</b>	Sponsored by TBA
1245-1330	<b>Workshop Panel Discussions</b>	Mike Hirschberg, Director Strategy VFS
<b>VFS/RWSI Meetings</b>		
1330-1500	TBA	TBA
<b>1500-1530</b>	<b>Tea/Coffee/Drinks Break</b>	Sponsored by TBA

## 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
1930-2000	Keynote 3 - Advanced Air Mobility - Way Ahead	James Wang, <i>Nanyang University, Singapore</i>
2000-2015	Course 1 – Entrees/Snacks	Officers Mess Staff
2015-2030	VFS and RWSI - History and Status Video	VFS and RWSI
2030-2045	VFS and RWSI Awards	VFS and RWSI
2045-2115	Course 2 - Dinner	Officers Mess Staff
2115-2125	ICAAMS 1 to ICAAMS 2 - Handing Taking Over	India to Singapore
2125-2200	Course 3 - Desert and Networking	Officers Mess Staff/Delegates





# ICAAMS -1

## Organising Team



<b>Chair</b>	: Arvind Sinha, <i>Melbourne University, Australia</i>
<b>Deputy Chair</b>	: Vijaya Kumar Mudubagilu, <i>Rotary Wing Society of India, India</i>
<b>Technical Chair Aerospace</b>	: Robert Hood, <i>Vertical Flight Society International, Australia</i>
<b>Technical Chair Aviation</b>	: BS Singh Deo, <i>Rotary Wing Society of India, India</i>
<b>Executive Committee</b>	: 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>
<b>Industry Advisors</b>	: 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>
<b>Technical Review Subcommittee</b>	: 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 &amp; D Centre, HAL, Bengaluru, India</i>
<b>Secretariate</b>	: Kalpana Dhar, <i>Rotary Wing Society of India, India</i> : Betty Chen, <i>Vertical Flight Society International, USA</i>

TBC: To be confirmed

### Sponsorship levels/events

	Platinum	Gold	Silver	Lunch/Dinner	Tea	Advertisement
<b>INR</b>	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
<b>Or US\$</b>	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](mailto: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