

ICAUV 2012: PLENARY SESSIONS

DAY – 1: 24th February 2012 (Friday)

Time: 1100 hrs to 1230 hrs

Plenary Session – I		
Chairman: Dr. A. Subhananda Rao, Chief Controller R&D (Aeronautics), DRDO, India		Co-Chairman: Mr. G. Sivasankaran, ADE, DRDO, India
PS1.1 (1100 to 1145 hrs)	Broad Area Maritime Surveillance UAS Program Update	Dr. Greg Miller Director (Business Development) Broad Area Maritime Surveillance Northrop Grumman Corporation, USA
PS1.2 (1145 to 1230 hrs)	Systems automation to meet the challenges for future Unmanned Air Vehicles	Dr. Siva S. Banda Chief Scientist Air Vehicles Directorate Air Force Research Laboratory, USA

DAY – 2: 25th February 2012 (Saturday)

Time: 1415 hrs to 1545 hrs

Plenary Session – II		
Chairman: Mr. P.S. Krishnan, Director, ADE, DRDO, India		Co-Chairman: Mr. P. Srikumar, ADE, DRDO, India
PS2.1 (1415 to 1500 hrs)	Unmanned Rotorcraft Systems	Prof. Ben M. Chen Director UAV Research Lab National University of Singapore, Singapore
PS2.2 (1500 to 1545 hrs)	Lockheed Martin Unmanned Systems and International Collaboration	Mr. John Sheehan Senior Systems Engineer Strategic Studies Group Lockheed Martin, USA

ICAUV 2012: PARALLEL TECHNICAL TRACKS

DAY – 1: 24th February 2012 (Friday)

Time: 1430 hrs to 1810 hrs

Aero-Propulsion System Chairman: Mr. P.S. Subramanyam , Programme Director (Combat Aircraft) & Director, Aeronautical Development Agency, India Co-Chairman: Mr. Sudhir Gupta, Director, DAero, India						
TRACK – A	A.1.1 1430 – 1510 hrs Developments in Solar Electric Hybrid Propulsion in General & Military Aviation Maj. Gen. H.H. "BUGS" FORSYTHE Bye Aerospace, Inc., USA	A.1.2 1510 – 1550 hrs Diesel Engines for UAV Dr. Erik Bollen Thielert Aircraft Engines GmbH, Germany	A.1.3 1550 – 1630 hrs Innovative Power Solutions for Unmanned Vehicles Dr. Robert Biggs Rolls Royce, UK	Networking Break 1630 – 1650 hrs	A.1.4 1650 – 1730 hrs Advancing Global Team Design & Development of UASs Dr. K.C. Wong The University of Sydney, Australia	A.1.5 1730 – 1810 hrs Advanced propulsion systems and Technologies for future unmanned Aircraft Systems Dr. Klaus-Peter Rued MTU Aero Engines GmbH, Germany
Flight and Mission Control Systems Chairman: Prof. Debasish Ghose , Indian Institute of Science, India Co-Chairman: Mr. A.V. Sabnis, ADE, DRDO, India						
TRACK – B	B.1.1 1430 – 1510 hrs Opportunities and Challenges for Autonomous Micro Aerial Vehicles Prof. Vijay Kumar University of Pennsylvania, USA	B.1.2 1510 – 1550 hrs Verifiable Performance of Dynamic Behavior of Multiple Unmanned Aerial Vehicles Prof. Antonios Tsourdos Cranfield University, UK	B.1.3 1550 – 1630 hrs Unmanned Aircraft Navigation for Shipboard Landing using Infrared Vision Prof. Oleg Yakimenko Naval Postgraduate School, USA	Networking Break 1630 – 1650 hrs	B.1.4 1650 – 1730 hrs Control and Guidance Challenges for Autonomous Systems Prof. I. Michael Ross Naval Postgraduate School, USA	B.1.5 1730 – 1810 hrs Challenges on Design and Evaluation of servo actuators for high altitude UAVs Dr. Yogendra Jahagirdar Jahagirdar Aero Products, India
Avionics Systems Chairman: Mr. G Elangovan , Chief Controller R&D (Avionics), DRDO, India Co-Chairman: Mr. M.L. Kumaraswamy, ADE, DRDO, India						
TRACK – C	C.1.1 1430 – 1510 hrs UAS Training Concept and Evolution LTC (Res.) Rahamim Naman IAI, MALAT, Israel	C.1.2 1510 – 1550 hrs MAGIC Automatic Take-off and Landing system Dr. Alain LEZLA Thales, France	C.1.3 1550 – 1630 hrs The Saab Approach to Mission Centric High Level Command and Control of UAS Mr. Håkan Ekström SAAB, Sweden	Networking Break 1630 – 1650 hrs	C.1.4 1650 – 1730 hrs Shadow 200 UAS Experience Dr. James Christner AAI Corporation, USA	C.1.5 1730 – 1810 hrs Common Ground Station for Unmanned Systems Mr. Ravindra Nirgudkar Raytheon, USA
Structures Systems Chairman: Prof. Ranjan Ganguli , Indian Institute of Science, India Co-Chairman: Dr. A.C.R. Pillai, ADE, DRDO, India						
TRACK – D	D.1.1 1430 – 1510 hrs MDO assisted structural design process for UAVs Dr.-Ing. Gerd Schuhmacher Cassidian (EADS), Germany	D.1.2 1510 – 1550 hrs UAS Experience of Brazilian Federal Police Mr. Jose Luiz Filho & Mr. Rodrigo Cardoso Federal Police Dept., Brazil	D.1.3 1550 – 1630 hrs Structural design aspects and criteria for autonomous UAVs Dr. Georg Guenther Cassidian (EADS), Germany	Networking Break 1630 – 1650 hrs	D.1.4 1650 – 1730 hrs The Future of Unmanned Aircraft in Air Warfare Dr. Tim Ward QinetiQ, UK	D.1.5 1730 – 1810 hrs UAV for civil applications - Are we geared up? Sqn. Ldr. (Retd.) V.S. Srinivasan TATA NOVA Integrated Systems, India
Operational Experiences and Lessons Learnt Chairman: Air Marshal (Retd.) Pandey , PVSM, AVSM, VM, Editor, SP AirBiz, India Co-Chairman: Mr. V. Ashok Rangan, ADE, DRDO, India						
TRACK – E	E.1.1 1430 – 1510 hrs Unmanned Air Systems Programmes Current & Future Wg. Cdr. David Postlethwaite Royal Air Force, UK	E.1.2 1510 – 1550 hrs Royal Air Force Remotely Piloted Air Systems: Operational Experiences and Lessons Identified Sqn. Ldr. Colin Brown Royal Air Force, UK	E.1.3 1550 – 1630 hrs Maritime Perspective of UAVs for the near future Cmde. Randhawa Naval HQrs, India	Networking Break 1630 – 1650 hrs	E.1.4 1650 – 1730 hrs IAF's perspective on Remotely Piloted Aircraft (RPAs) Gp. Capt. G.S. Chauhan Indian Air Force	E.1.5 1730 – 1810 hrs Employment of UAVs in Army Col. Akash Bajaj Indian Army

ICAUV 2012: PARALLEL TECHNICAL TRACKS

DAY – 2: 25th February 2012 (Saturday)

Time: 0900 hrs to 1240 hrs

Unmanned Ground Vehicles						
Chairman: Mr. S. Sundaresh , Chief Controller R&D (Armament & Combat Engineering and Service Interaction)				Co-Chairman: Mr. S. Gurudev , ADE, DRDO, India		
TRACK – A	A.2.1 0900 – 0940 hrs	A.2.2 0940 – 1020 hrs	A.2.3 1020 – 1100 hrs	Networking Break 1100 – 1120 hrs	A.2.4 1120 – 1200 hrs	A.2.5 1200 – 1240 hrs
	Swarm control of Autonomous Micro Ground Vehicles Prof. Vijay Kumar University of Pennsylvania, USA	Increasing autonomy of Unmanned Ground Systems Mr. Glenn Callow BAE Systems, UK	Challenges in design of Unmanned Ground Vehicles Dr. S. Guruparasad R&D(E), DRDO, India		Engine Development for UAV Applications – Experiences and Challenges Dr. C.P. Ramanarayanan VRDE, DRDO, India	Unmanned Ground Vehicles Mr. P. Sivakumar CVRDE, DRDO, India
Unmanned Underwater Vehicles						
Chairman: Dr. V. Bhujanga Rao , Chief Controller R&D (Human Resources), DRDO, India				Co-Chairman: Mr. K.V.R. Murty , IFA (R&D), DRDO, India		
TRACK – B	B.2.1 0900 – 0940 hrs	B.2.2 0940 – 1020 hrs	B.2.3 1020 – 1100 hrs	Networking Break 1100 – 1120 hrs	B.2.4 1120 – 1200 hrs	B.2.5 1200 – 1240 hrs
	Networking ocean and air unmanned vehicles: challenges and opportunities Dr. João Borges Sousa Porto University, Portugal	Challenges in navigation of autonomous underwater vehicles Dr. Elgar de Sa NIO, India	Autonomous underwater vehicles- Vision for India Mr. S.V. Rangarajan NSTL, DRDO, India		ASW: Some Long Term Scientific Challenges and Problems Prof. Sivaguru S. Sritharan Naval Postgraduate School, USA	Automation and Autonomy – Keys to UAV Ubiquity Dr. David William Vos Rockwell Collins, USA
UAV Certification and Challenges						
Chairman: Dr K Tamilmani , Chief Executive, Centre for Military Airworthiness and Certification, DRDO, India				Co-Chairman: Mr. G. Sivasankaran , ADE, DRDO, India		
TRACK – C	C.2.1 0900 – 0940 hrs	C.2.2 0940 – 1020 hrs	C.2.3 1020 – 1100 hrs	Networking Break 1100 – 1120 hrs	C.2.4 1120 – 1200 hrs	C.2.5 1200 – 1240 hrs
	Developing the regulatory framework for remotely-piloted aircraft systems Ms. Leslie Cary ICAO, Canada	EUROCAE Working Group 93 on Smaller RPA – How India can participate & the advantages Mr. Peter Van Blyenburgh UVS International, France	UK Airspace Integration and the ASTRAEA Programme Mr. Gary Morgan BAE Systems, UK		TRACKER, a combat-proven mini UAV, Lessons learned from Afghanistan Ms. Annelise Lethimonnier Cassidian (EADS), France	EUROCAE Working Group 73 on UAS Mr. Tore Kallevig Avinor AS, Norway
Mini and Micro UAV Systems						
Chairman: Dr. K. Sekhar , Chief Controller R&D (Low Intensity Conflicts & Implementation), DRDO, India				Co-Chairman: Mr. S. Sampath Kumar , ADE, DRDO, India		
TRACK – D	D.2.1 0900 – 0940 hrs	D.2.2 0940 – 1020 hrs	D.2.3 1020 – 1100 hrs	Networking Break 1100 – 1120 hrs	D.2.4 1120 – 1200 hrs	D.2.5 1200 – 1240 hrs
	Rapid development, prototyping, manufacture and deployment of UAS Dr. Ian Robert Williams-Wynn Blue Bear Systems, UK	Silver Fox Battalion Mr. Matthew Pobloske BAE Systems, USA	Acoustic vector sensors on unmanned aerial vehicles Dr. Hans-Elias de Bree Microflow Technologies, Netherlands		From Insects to MAV - the Next Grand Challenge in Aerodynamic Designs Prof. George Huang Wright State University, USA	The New Era of Aerial Delivery of Supplies and Sensors Dr. Oleg Yakimenko Naval Postgraduate School, USA
Current & Future Trends						
Chairman: Dr. Prahalada , Vice Chancellor, Defence Institute of Advanced Technology, DRDO, India				Co-Chairman: Mr. Devabrata Bose , ADE, DRDO, India		
TRACK – E	E.2.1 0900 – 0940 hrs	E.2.2 0940 – 1020 hrs	E.2.3 1020 – 1100 hrs	Networking Break 1100 – 1120 hrs	E.2.4 1120 – 1200 hrs	E.2.5 1200 – 1240 hrs
	From UV to advanced ISR system Mr. Penhas Yuval Elbit Systems, Israel	Saab Research and Development Response to Current UAS trends Dr. Gunnar Holmberg SAAB, Sweden	Cooperative Pursuit and Evasion Strategies for Unmanned Aircraft Protection from a Homing Missile Dr. Tal Shima Technion, Israel		Civil-Military Integration using UAS Mr. Mathias Burtscher SkyGuide ATM Solutions, Switzerland	Roadmap for Autonomous mission control for long range UAVs Mr. P. Srikumar ADE, DRDO, India

ICAUV 2012: PARALLEL INDUSTRY TRACKS

DAY – 2: 25th February 2012 (Saturday)

Time: 1415 hrs to 1505 hrs

Industry Session – I					
Chairman: Mr. Jayant Baranwal , CMD & Editor-in-Chief, SP Guide Publications, New Delhi			Co-Chairman: Mr. S. Radhakrishnan , Director, DIITM, DRDO, India		
TRACK – F	F.1 1415 – 1425 hrs	F.2 1425 – 1435 hrs	F.3 1435 – 1505 hrs		
	Advances in Real-Time UAV Simulation Dr. Ravinder Venugopal OPAL-RT, Canada	Program update on the VTOL UAS APID-60 Mr. Niklas Nyroth CybAero, Sweden	T-Hawk VTOL UAS: Development + Operational Experience & Lesson Learned Dr. Prabha Gopinath Honeywell Defence and Space, USA		
Industry Session – II					
Chairman: Prof. M. Seetharama Bhat , Chairman, Aerospace Engineering, Indian Institute of Science, India			Co-Chairman: Mr. G. Chandraprakash , ADE, DRDO, India		
TRACK – G	G.1 1415 – 1425 hrs	G.2 1425 – 1435 hrs	G.3 1435 – 1445 hrs	G.4 1445 – 1455 hrs	G.5 1455 – 1505 hrs
	Barco's High Performance Visualization for Simulated Environments Dr. Ábel Garamhegyi BARCO, India	Use of cooled and Uncooled Thermal Imaging Cameras in UAV and Pan Tilt units for security applications Mr. T.P. Singh FLIR, India	SAMCEF Applications of Composites- Hot topics and Trends Mr. Sudheendra G. Ramanjaneyulu LMS, India	L-3 Wescam Products Mr. Dominic Houlemard L-3 Communications, USA	The Critical Role of Physics Based Simulation in UAS Design and Development Dr. Kaustubh Shrikant Nande ANSYS, India
Industry Session – III					
Chairman: Lt. Gen. (Retd.) Dr. V.J. Sundaram , PVSM, AVSM, VSM, Advisor, Micro & Nano Systems, NDRF, India			Co-Chairman: Mr. R. Mathaiyan , ADE, DRDO, India		
TRACK – H	H.1 1415 – 1425 hrs	H.2 1425 – 1455 hrs	H.3 1455 – 1505 hrs		
	The CAMCOPTER® S-100 VTOL UAS Mr. Andrew BYRNE Schiebel Aircraft GmbH, Austria	Cdr. V. Gijare Indian Navy	Cost-effective Simulation of Light UAS Dr. Eric Simon Presagis, Canada		