

FT2025

SWEDISH AEROSPACE ↔ AT THE CROSSROADS

The 12th Swedish
Aerospace Technology Congress
FT2025 in Stockholm
October 14-15, 2025

ICAS – an evolution in perspectives



Chris Atkin

ICAS President 2025-26

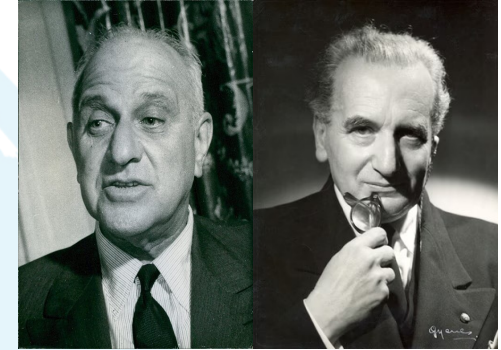


Covering the World of Aeronautics

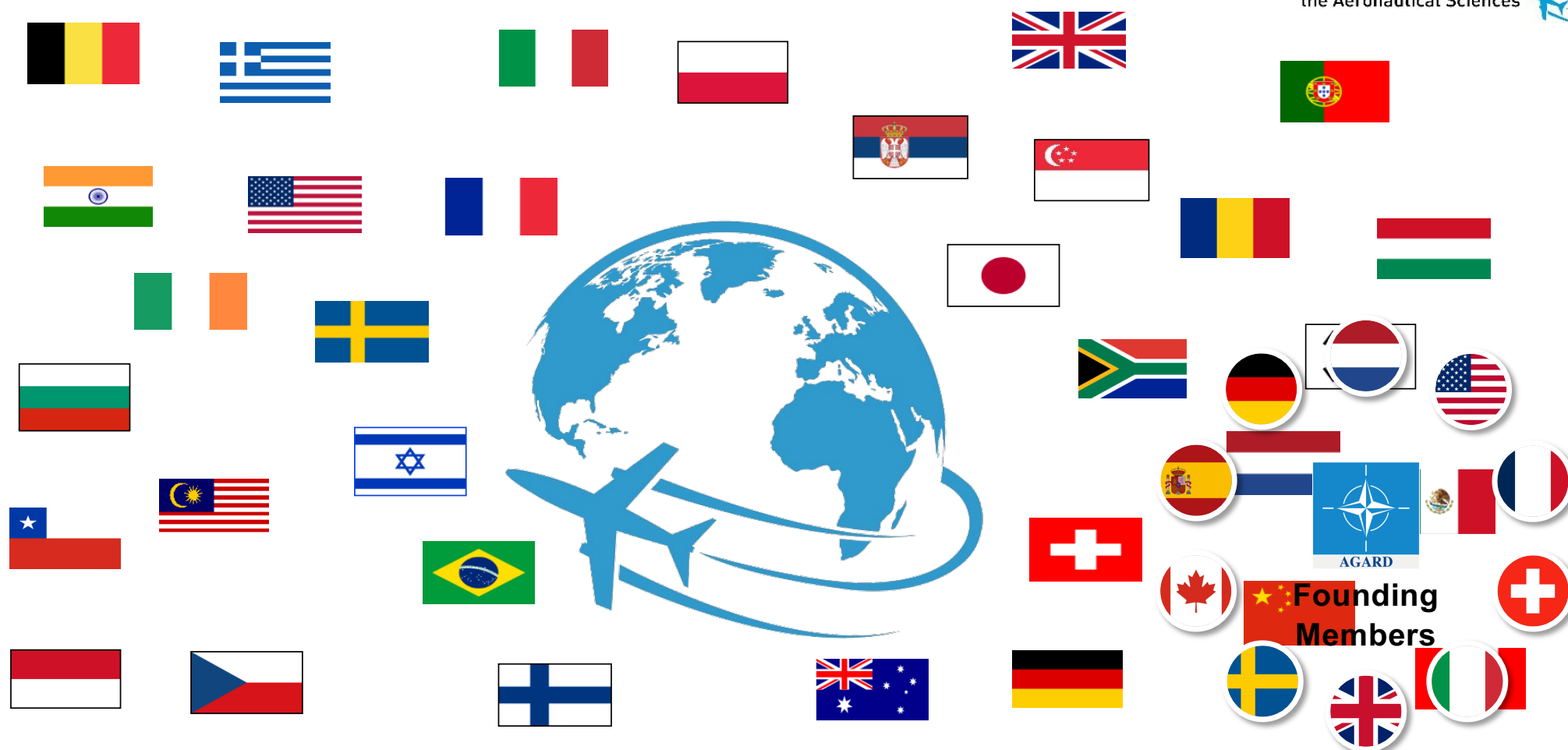
ICAS – who are we?



- Founded in 1957, ICAS is the creation of two visionary individuals, Harry Guggenheim and Theodore von Kármán, with the objective of uniting the national learned societies in aeronautics
- ICAS was founded as, and remains, a non-government, not-for-profit scientific organization
- ICAS was founded to encourage the free international exchange of information on aeronautical research and technology
- The ICAS mission has evolved since 1957...



ICAS in 2025: Member Society Nations





Covering the world of aeronautics

ICAS in 2025: Associate Members



ICAS in 2025 ...



What do we do?



- ICAS holds a biennial Congress, attended by 800-1200 specialists
 - We cover both programmatic and technical topics
 - Keynotes from leaders in the aeronautical community address key opportunities and challenges for the sector
- In between Congresses, ICAS holds its Emerging Technology Forum, which gathers experts to focus on specific topics of developing significance
- ICAS recognizes international achievement through Honours and Awards



ICAS Congress Venues

1958	Spain – Madrid	1988	Israel – Jerusalem	2018	Brazil – Belo Horizonte
1960	Switzerland – Zurich	1990	Sweden – Stockholm		
1962	Sweden – Stockholm	1992	China – Beijing	2021	China – Shanghai (hybrid)
1964	France – Paris	1994	United States – Anaheim		
1966	United Kingdom – London	1996	Italy – Sorrento	2022	Sweden – Stockholm
1968	Germany – Munich	1998	Australia – Melbourne		
1970	Italy – Rome	2000	United Kingdom – Harrogate	2024	Italy – Florence
1972	The Netherlands – Amsterdam	2002	Canada – Toronto		
1974	Israel – Haifa	2004	Japan – Yokohama	2026	<i>Australia – Sydney</i>
1976	Canada – Ottawa	2006	Germany – Hamburg		
1978	Portugal – Lisbon	2008	United States – Anchorage	2028	<i>Canada – Montreal</i>
1980	Germany – Munich	2010	France – Nice		
1982	United States – Seattle	2012	Australia – Brisbane		
1984	France – Toulouse	2014	Russia – St. Petersburg		
1986	United Kingdom – London	2016	Korea – Daejeon		

Check out icas2026.com!

ICAS ETF Venues & Topics

- 2003** **Italy – Sorrento:** *Towards a Global Vision for Aeronautics*
- 2005** **Greece – Mykonos:** *Towards a Global Vision for Aviation Safety and Security*
- 2007** **Spain – Seville :** *UAV Airworthiness – Certification and Access to the Airspace*
- 2009** **The Netherlands – Amsterdam:** *Aviation and Environment*
- 2011** **Sweden – Stockholm:** *Advanced Materials & Manufacturing – Certification & Operational Challenges*
- 2013** **South Africa – Cape Town:** *The More Electric Aircraft: Achievements and Perspectives for the Future*
- 2015** **Poland – Krakow:** *Complex Systems Integration in Aeronautics*
- 2017** **Switzerland – Winterthur:** *Intelligent and Autonomous Technologies in Aeronautics*
- 2019** **Australia – Melbourne:** *Digital Transformation in Aerospace*
- 2023** **Japan – Kyoto:** *Urban Air Mobility*
- 2025** **Czech Republic – Brno:** *Shaping Aviation for Society*

ICAS Honours and Awards (1)



- ICAS Daniel and Florence Guggenheim Award
 - To recognise and honour a scientist or engineer of eminence who in a long and productive career has made a significant contribution to progress in aeronautics
- ICAS von Karman Award for International Cooperation in Aeronautics
 - To acknowledge exceptional achievement in international cooperation in the field of aeronautics, awarded to a project or programme ... characterized by substantial technical achievement, scientific advance or benefit to society
- ICAS Award for Innovation in Aeronautics
 - To recognize contributions of an individual or a team ... to create a new aeronautical system with significant worldwide impact

*The **Sweden – Brasil collaboration** (Gripen & SARC/BARINET) has been nominated for the 2026 von Karman Award*

ICAS Honours and Awards (2)

- ICAS Maurice Roy Award
 - To honour persons of distinction who have an exceptional record in fostering international cooperation in the field of aeronautics
- ICAS John J. Green Award
 - To honour young persons of distinction who are demonstrating an exceptional record in fostering international cooperation
- ICAS John McCarthy Student Award
 - To honour students who present a paper at the Congress with a high quality of content and delivery
- ICAS IFAR Award
 - To recognize the excellence of a PhD thesis delivered by an IFAR researcher

The ICAS Engine Room (Programme Committee)



Andrea **Alaimo**, IT
Maurilio **Albanese**, BR
Naomi Allen, UK
Ken **Anderson**, AU
Adriana Andreeva-Mori, JP
Chris **Atkin**, UK
Hanafi **Azami**, MY
João **Azevedo**, BR
Sara **Bagassi**, IT
Javid **Bayandor**, AU
Michael Benner, CA
Gaudy **Bezoz O Connor**, US
Cees **Bil**, AU
Christian **Breitsamter**, DE
Mark **Brown**, JP
Pedro Camanho, PT
Luis **Campos**, PT
Jun **Che**, CN
Yingchun **Chen**, CN
Fay **Collier**, US
Maria **Consiglio**, US
Sheila **Conway**, US
Yuval Dagan, IL
Anne Denquin, FR
Matteo **Filippi**, IT
Billy **Fredriksson**, SE
Jian **Fu**, CN
Song **Fu**, CN
David So Man Fung, SG

Zenghong **Gao**, CN
Roland **Gerhards**, DE
Tom **Gibson**, UK
Tomasz **G.-Grabowski**, PL
Erwin **Gowree**, UK
Dongdong **Gu**, CN
Eduardo **Guevara**, CL
Gustavo **Halila**, BR
Jay **Han**, KR
Mohammad Harmin, MY
Frank **Haselbach**, UK
Gunnar Holmberg, SE
Stefan **Hristozov**, BU
Tagashige **Ikeda**, JP
Taro **Imamura**, JP
Chetan Jagadeesh, UK
Liping **Jiang**, CN
Christopher Jouannet, SE
Jaroslav **Juracka**, CZ
Mikko **Kanerva**, FI
Georgios **Kanterakis**, GR
Michael **Kelly**, US
Youdan **Kim**, KR
Lukasz **Kiszkowiak**, PL
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Petter **Krus**, SE
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Bok Jik **Lee**, KR

Chang-Hún **Lee**, KR
Alejandro Lopez, CL
Mario **Lott**, BR
Per-Olof **Marklund**, SE
Leonardo **Manfriani**, CH
David **Maroney**, US
Dimitri **Mavris**, US
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Danielle Moreau, AU
John **Monk**, ZA
Ryota **Mori**, JP
Detlef **Mueller-Wiesner**, DE
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Fabrizio **Nicolosi**, IT
Paulo Oliveira, PT
Mattia **Padulo**, FR
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Bosko **Rasuo**, RS
Karl **Rein-Weston**, US

Sergio **Ricci**, IT
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Ricardo **Saez**, CL
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Peter **Schmollgruber**, FR
Murray **Scott**, AU
Vitaly **Shaferman**, IL
Konstantinos **Stamoulis**, GR
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Angela **Vozella**, IT
Rich **Wahls**, US
Tung **Wan**, TW
Geoff **Wilkinson**, AU
Virginie Wiels, FR
Susan **Ying**, US
David **Zingg**, CA

PC CHAIR **NEW MEMBERS** **JOHN J GREEN AWARDEE(s)** **FAILED TO ATTEND MEETINGS**

Currently **110** members, as of 28 May, 2025

Evolving Perspectives (1)

- ICAS Technical Panels:
 - Disruptive forces
 - System level challenges
 - Climate impact
 - Clean propulsion
 - eVTOL and UAS
 - Big data and AI
 - Growth in technology use during operations, versus design & manufacture
1. **Aircraft Design and Integrated Systems**
(1.1 Methods; 1.2 Applications)
 2. **Systems Engineering and Integration**
 - 3.1 **Aerodynamics - CFD Methods and Validation**
 - 3.2 **Experimental Aerodynamics**
 - 3.3 **Basic Fluid Dynamics and Flow Control**
 - 3.4 **Applied Aerodynamics**
 - 4.1 **Material Issues, Fatigue and Damage Tolerance**
 - 4.2 **Structural Analysis and Design, Structural Dynamics and Aeroelasticity**
 5. **Propulsion and Energy**
 - 6.1 **Flight Dynamics and Control (Control & Modelling)**
 - 6.2 **Flight Dynamics and Control (UAV Related)**
 7. **Systems, Subsystems and Equipment**
 8. **Manufacturing and Supply Chain Management**
 9. **Air Transport System Efficiency**
 10. **Safety and Security**
 11. **Operations and Sustainment**
 12. **Education and Training**

ICAS Congress 2024 – 18 Parallel Tracks



Monday September 9	Mon 10:30-12:05 Session 1	GSA Setting the Scene	P1.2 Hydrogen Aircraft 1	P1.1 Aircraft Design	P2 Systems Engineering	P3.1 Applied CFD 1	P3.3 AI-assisted Flow Analysis	ICAS Invited: IFAR Civil Aviation and AAM Initiatives	P3.2 Complex Flow Phenomena	P4.1 Micro-nano Structures	P4.1 Aerostructures	P4.2 Dynamic Loads	P4.2 Computational Aeroelasticity 1	P5 Combustion Heat Transfer 1	P10 Air Taxis	P12 Education and Training Enablers	P11 Future Maintenance Practices	P7 Actuator Systems
	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
Tuesday September 10	Tue 9:30-12:00 Session 4	GSA Electric and Hydrogen Technology	ICAS Invited: Progress towards BWB Concept Test and Development	P1.1 MDAO	P2 MBSE	P1.2 Supersonic and Hypersonic Aircraft 1	P3.1 Transition Modeling	P5 Regional Fuel-flexible and Hybrid Flight Demos - Lessons Learned	P3.4 Airframe Aerodynamics 2	ICAS Invited: ERC	P4.1 Impact	P4.2 Vibrations and Damping	P9 Trajectory Planning and Weather	P5 Propellers, Fans & Compressors 1	P5 Hybrid Electric Regional Aircraft Concepts	P4.1 Structural Modelling	P11 Advanced Maintenance Data Management	P7 Systems Safety Aspects
	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT / Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
Wednesday September 11	Wed 10:30-12:05 Session 7	GSA Propulsion & Energy 1	P3.X High Lift Common Research Model Ecosystem (CRM-HL1)	P1.1 Design of Sustainable Aircraft 2 (Climate Impact)	P1.1 LH2 Fuel Tank Configurations	P1.2 Sustainable Aviation 3	P3.3 Shock Interactions	P5 (Gaudy) EVTOL Concepts	P3.4 Airframe Aeroacoustics	P9 Trajectory Management	P4.1 Structural Measurement Techniques	P4.2 Aeroelastic Tailoring 1	P4.2 Structural Design and Optimization 4	P3.1 High Speed and Cavity Flows	P10 Accident Prevention & Survivability 1	P6.2 Innovative UAV Technologies	P8 Advanced Manufacturing Technology 2	P11 Digital Processes for Non-Destructive Evaluation
	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM-HL2)	P2 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	P3.1 CFD and Sustainable Aviation	P3.1 Low Reynolds Number Aerodynamics	P3.3 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
Thursday September 12	Thu 09:30-12:00 Session 10	GSA Airliner OEM Strategy Overview	P3.X Integrated CFD Validation for Low Speed Aerodynamics	P1.1 Wing Design	P1.2 Supersonic and Hypersonic Aircraft 2	P3.1 Aerodynamic Optimization	P3.3 Boundary Layer Transition & Control	P5 EAP Regulations & Standards: Opportunities and Challenges	P3.4 Airfoil and Wing Performance	P9 Airport and ATC Operations	P4.2 Challenge of High AR Wings 1: Aeroelastic Issues	P4.2 Computational Aeroelasticity 2	P10 Human Factors 1	P5 System-wide Benefits of MW Class Hybrid Electric Aircraft	P10 Moreals	P6.2 UAV Control Systems 1	ICAS Invited: Student Final	P11 Advanced Air Mobility Operations
	Thu 13:00-15:00 Session 11	GSA Airspace & Operational Efficiency	P4.2 Challenge of High AR Wings 2: Design, Aerodynamic and	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 3	P1.2 Unconventional Aircraft	P3.1 Aeroacoustic Analysis	P3.1 Turbulence Modelling	ICAS Invited: ICAS Digital Pioneering Initiative	P3.4 Aerodynamics of Unconventional Configurations	P9 Optimal Operations	P4.1 Bonding / Mechanical Behaviour	P3.2 Aerodynamic Instrumentation and Measurement 2	P4.1 Composites 3	P5 Propellers, Fans & Compressors 4	P10 Navigation, Comms & Radar	P7 Flight Systems Dynamics	P8 Manufacturing & Supply Chain Management	P11 Environmental Impact of Aircraft Operations

ICAS Congress 2024 – Invited Sessions

Monday September 9	Mon 10:30-12:05 Session 1	GSA Setting the Scene	P1.2 Hydrogen Aircraft 1	P1.1 Aircraft Design	P2 Systems Engineering	P3.1 Applied CFD 1	P3.3 AI-assisted Flow Analysis	ICAS Invited: IFAR Civil Aviation and AAM Initiatives	P3.2 Complex Flow Phenomena	P4.1 Micro-nano Structures	P4.1 Aerostructures	P4.2 Dynamic Loads	P4.2 Computational Aeroelasticity 1	P5 Combustion Heat Transfer 1	P10 Air Taxis	P12 Education and Training Enablers	P11 Future Maintenance Practices	P7 Actuator Systems
	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
Tuesday September 10	Tue 9:30-12:00 Session 4	GSA Electric and Hydrogen Technology	ICAS Invited: Progress towards BWB Concept Test and Development	P1.1 MDAO	P2 MBSE	P1.2 Supersonic and Hypersonic Aircraft 1	P3.1 Transition Modeling	P8 Regional Fuel- flexible and Hybrid Flight Demos - Lessons Learned	P3.4 Airframe Aerodynamics 2	ICAS Invited: ERC	P4.1 Impact	P4.2 Vibrations and Damping	P9 Trajectory Planning and Weather	P5 Propellers, Fans & Compressors 1	P5 Hybrid Electric Regional Aircraft Concepts	P4.1 Structural Modelling	P11 Advanced Maintenance Data Management	P7 Systems Safety Aspects
	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT/ Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
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	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM- HL) 2	P2 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	P3.1 CFD and Sustainable Aviation	P3.3 Low Reynolds Number Aerodynamics	P3.2 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
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ICAS Congress 2024 – Sustainable Aviation Focus



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	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
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	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT / Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
Wednesday September 11	Wed 10:30-12:05 Session 7	GSA Propulsion & Energy 1	P3.X High Lift Common Research Model Ecosystem (CRM-HL1)	P1.1 Design of Sustainable Aircraft 2 (Climate Award)	P1.1 LH2 Fuel Tank Configurations	P1.2 Sustainable Aviation 3	P3.3 Shock Interactions	P5 (Gaudy) EVTOL Concepts	P3.4 Airframe Aeroacoustics	P9 Trajectory Management	P4.1 Structural Measurement Techniques	P4.2 Aeroelastic Tailoring 1	P4.2 Structural Design and Optimization 4	P3.1 High Speed and Cavity Flows	P10 Accident Prevention & Survivability 1	P6.2 Innovative UAV Technologies	P8 Advanced Manufacturing Technology 2	P11 Digital Processes for Non-Destructive Evaluation
	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM-HL1.2)	P2 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	P3.1 CFD and Sustainable Aviation	P3.1 Low Reynolds Number Aerodynamics	P3.3 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
Thursday September 12	Thu 09:30-12:00 Session 10	GSA Airliner OEM Strategy Overview	P3.X Integrated CFD Validation for Low Speed Aerodynamics	P1.1 Wing Design	P1.2 Supersonic and Hypersonic Aircraft 2	P3.1 Aerodynamic Optimization	P3.3 Boundary Layer Transition & Control	P5 EAP Regulations & Standards: Opportunities and Challenges	P3.4 Airfoil and Wing Performance	P9 Airport and ATC Operations	P4.2 Challenge of High AR Wings 1: Aeroelastic Issues	P4.2 Computational Aeroelasticity 2	P10 Human Factors 1	P5 System-wide Benefits of MW Class Hybrid Electric Aircraft	P10 Morealis	P6.2 UAV Control Systems 1	ICAS Invited: Student Final	P11 Advanced Air Mobility Operations
	Thu 13:00-15:00 Session 11	GSA Airspace & Operational Efficiency	P4.2 Challenge of High AR Wings 2: Design, Aerodynamic and	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 3	P1.2 Unconventional Aircraft	P3.1 Aeroacoustic Analysis	P3.1 Turbulence Modelling	ICAS Invited: ICAS Digital Pioneering Initiative	P3.4 Aerodynamics of Unconventional Configurations	P9 Optimal Operations	P4.1 Bonding / Mechanical Behaviour	P3.2 Aerodynamic Instrumentation and Measurement 2	P4.1 Composites 3	P5 Propellers, Fans & Compressors 4	P10 Navigation, Comms & Radar	P7 Flight Systems Dynamics	P8 Manufacturing & Supply Chain Management	P11 Environmental Impact of Aircraft Operations

ICAS Congress 2024 – Electric Propulsion Focus



Monday September 9	Mon 10:30-12:05 Session 1	GSA Setting the Scene	P1.2 Hydrogen Aircraft 1	P1.1 Aircraft Design	P2 Systems Engineering	P3.1 Applied CFD 1	P3.3 AI-assisted Flow Analysis	ICAS Invited: IFAR Civil Aviation and AAM Initiatives	P3.2 Complex Flow Phenomena	P4.1 Micro-nano Structures	P4.1 Aerostructures	P4.2 Dynamic Loads	P4.2 Computational Aeroelasticity 1	P5 Combustion Heat Transfer 1	P10 Air Taxis	P12 Education and Training Enablers	P11 Future Maintenance Practices	P7 Actuator Systems
	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
Tuesday September 10	Tue 9:30-12:00 Session 4	GSA Electric and Hydrogen Technology	ICAS Invited: Progress towards BWB Concept Test and Development	P1.1 MDAO	P2 MBSE	P1.2 Supersonic and Hypersonic Aircraft 1	P3.1 Transition Modeling	P5 Regional Fuel-flexible and Hybrid Flight Demos - Lessons Learned	P3.4 Airframe Aerodynamics 2	ICAS Invited: ERC	P4.1 Impact	P4.2 Vibrations and Damping	P9 Trajectory Planning and Weather	P5 Propellers, Fans & Compressors 1	P5 Hybrid Electric Regional Aircraft Concepts	P4.1 Structural Modelling	P11 Advanced Maintenance Data Management	P7 Systems Safety Aspects
	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT / Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
Wednesday September 11	Wed 10:30-12:05 Session 7	GSA Propulsion & Energy 1	P3.X High Lift Common Research Model Ecosystem (CRM-HL1)	P1.1 Design of Sustainable Aircraft 2 (Climate Impact)	P1.1 LH2 Fuel Tank Configurations	P1.2 Sustainable Aviation 3	P3.3 Shock Interactions	P5 (Gaudy) EVTOL Concepts	P3.4 Airframe Aeroacoustics	P9 Trajectory Management	P4.1 Structural Measurement Techniques	P4.2 Aeroelastic Tailoring 1	P4.2 Structural Design and Optimization 4	P3.1 High Speed and Cavity Flows	P10 Accident Prevention & Survivability 1	P6.2 Innovative UAV Technologies	P8 Advanced Manufacturing Technology 2	P11 Digital Processes for Non-Destructive Evaluation
	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM-HL2)	P2 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	CFD and Sustainable Aviation	P3.1 Low Reynolds Number Aerodynamics	P3.3 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
Thursday September 12	Thu 09:30-12:00 Session 10	GSA Airliner OEM Strategy Overview	P3.X Integrated CFD Validation for Low Speed Aerodynamics	P1.1 Wing Design	P1.2 Supersonic and Hypersonic Aircraft 2	P3.1 Aerodynamic Optimization	P3.3 Boundary Layer Transition & Control	P5 EAP Regulations & Standards: Opportunities and Challenges	P3.4 Airfoil and Wing Performance	P9 Airport and ATC Operations	P4.2 Challenge of High AR Wings 1: Aeroelastic Issues	P4.2 Computational Aeroelasticity 2	P10 Human Factors 1	P5 System-wide Benefits of MW Class Hybrid Electric Aircraft	P10 Moreals	P6.2 UAV Control Systems 1	ICAS Invited: Student Final	P11 Advanced Air Mobility Operations
	Thu 13:00-15:00 Session 11	GSA Airspace & Operational Efficiency	P4.2 Challenge of High AR Wings 2: Design, Aerodynamic and	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 3	P1.2 Unconventional Aircraft	P3.1 Aeroacoustic Analysis	P3.1 Turbulence Modelling	ICAS Invited: ICAS Digital Pioneering Initiative	P3.4 Aerodynamics of Unconventional Configurations	P9 Optimal Operations	P4.1 Bonding / Mechanical Behaviour	P3.2 Aerodynamic Instrumentation and Measurement 2	P4.1 Composites 3	P5 Propellers, Fans & Compressors 4	P10 Navigation, Comms & Radar	P7 Flight Systems Dynamics	P8 Manufacturing & Supply Chain Management	P11 Environmental Impact of Aircraft Operations

ICAS Congress 2024 – Hydrogen Focus

Monday September 9	Mon 10:30-12:05 Session 1	GSA Setting the Scene	P1.2 Hydrogen Aircraft 1	P1.1 Aircraft Design	P2 Systems Engineering	P3.1 Applied CFD 1	P3.3 AI-assisted Flow Analysis	ICAS Invited: IFAR Civil Aviation and AAM Initiatives	P3.2 Complex Flow Phenomena	P4.1 Micro-nano Structures	P4.1 Aerostructures	P4.2 Dynamic Loads	P4.2 Computational Aeroelasticity 1	P5 Combustion Heat Transfer 1	P10 Air Taxis	P12 Education and Training Enablers	P11 Future Maintenance Practices	P7 Actuator Systems
	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
Tuesday September 10	Tue 9:30-12:00 Session 4	GSA Electric and Hydrogen Technology	ICAS Invited: Progress towards BWB Concept Test and Development	P1.1 MDAO	P2 MBSE	P1.2 Supersonic and Hypersonic Aircraft 1	P3.1 Transition Modeling	P5 Regional Fuel-flexible and Hybrid Flight Demos - Lessons Learned	P3.4 Airframe Aerodynamics 2	ICAS Invited: ERC	P4.1 Impact	P4.2 Vibrations and Damping	P9 Trajectory Planning and Weather	P5 Propellers, Fans & Compressors 1	P5 Hybrid Electric Regional Aircraft Concepts	P4.1 Structural Modelling	P11 Advanced Maintenance Data Management	P7 Systems Safety Aspects
	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT / Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
Wednesday September 11	Wed 10:30-12:05 Session 7	GSA Propulsion & Energy 1	P3.X High Lift Common Research Model Ecosystem (CRM-HL1)	P1.1 Design of Sustainable Aircraft 2 (Climate Impact)	P1.1 LH2 Fuel Tank Configurations	P1.2 Sustainable Aviation 3	P3.3 Shock Interactions	P5 (Gaudy) EVTOL Concepts	P3.4 Airframe Aeroacoustics	P9 Trajectory Management	P4.1 Structural Measurement Techniques	P4.2 Aeroelastic Tailoring 1	P4.2 Structural Design and Optimization 4	P3.1 High Speed and Cavity Flows	P10 Accident Prevention & Survivability 1	P6.2 Innovative UAV Technologies	P8 Advanced Manufacturing Technology 2	P11 Digital Processes for Non-Destructive Evaluation
	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM-HL1.2)	P2 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	P3.1 CFD and Sustainable Aviation	P3.1 Low Reynolds Number Aerodynamics	P3.3 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
Thursday September 12	Thu 09:30-12:00 Session 10	GSA Airliner OEM Strategy Overview	P3.X Integrated CFD Validation for Low Speed Aerodynamics	P1.1 Wing Design	P1.2 Supersonic and Hypersonic Aircraft 2	P3.1 Aerodynamic Optimization	P3.3 Boundary Layer Transition & Control	P5 EAP Regulations & Standards: Opportunities and Challenges	P3.4 Airfoil and Wing Performance	P9 Airport and ATC Operations	P4.1 Challenge of High AR Wings 1: Aeroelastic Issues	P4.2 Computational Aeroelasticity 2	P10 Human Factors 1	P5 System-wide Benefits of MW Class Hybrid Electric Aircraft	P10 Moreals	P6.2 UAV Control Systems 1	ICAS Invited: Student Final	P11 Advanced Air Mobility Operations
	Thu 13:00-15:00 Session 11	GSA Airspace & Operational Efficiency	P4.2 Challenge of High AR Wings 2: Design, Aerodynamic and	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 3	P1.2 Unconventional Aircraft	P3.1 Aeroacoustic Analysis	P3.1 Turbulence Modelling	ICAS Invited: ICAS Digital Pioneering Initiative	P3.4 Aerodynamics of Unconventional Configurations	P9 Optimal Operations	P4.1 Bonding / Mechanical Behaviour	P3.2 Aerodynamic Instrumentation and Measurement 2	P4.1 Composites 3	P5 Propellers, Fans & Compressors 4	P10 Navigation, Comms & Radar	P7 Flight Systems Dynamics	P8 Manufacturing & Supply Chain Management	P11 Environmental Impact of Aircraft Operations

ICAS Congress 2024 – AAM Focus



Monday September 9	Mon 10:30-12:05 Session 1	GSA Setting the Scene	P1.2 Hydrogen Aircraft 1	P1.1 Aircraft Design	P2 Systems Engineering	P3.1 Applied CFD 1	P3.3 AI-assisted Flow Analysis	ICAS Invited: IFAR Civil Aviation and AAM Initiatives	P3.2 Complex Flow Phenomena	P4.1 Micro-nano Structures	P4.1 Aerostructures	P4.2 Dynamic Loads	P4.2 Computational Aeroelasticity 1	P5 Combustion Heat Transfer 1	P10 Air Taxis	P12 Education and Training Enablers	P11 Future Maintenance Practices	P7 Actuator Systems
	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
Tuesday September 10	Tue 9:30-12:00 Session 4	GSA Electric and Hydrogen Technology	ICAS Invited: Progress towards BWB Concept Test and Development	P1.1 MDAO	P2 MBSE	P1.2 Supersonic and Hypersonic Aircraft 1	P3.1 Transition Modeling	P5 Regional Fuel-flexible and Hybrid Flight Demos - Lessons Learned	P3.4 Airframe Aerodynamics 2	ICAS Invited: ERC	P4.1 Impact	P4.2 Vibrations and Damping	P9 Trajectory Planning and Weather	P5 Propellers, Fans & Compressors 1	P5 Hybrid Electric Regional Aircraft Concepts	P4.1 Structural Modelling	P11 Advanced Maintenance Data Management	P7 Systems Safety Aspects
	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT / Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
Wednesday September 11	Wed 10:30-12:05 Session 7	GSA Propulsion & Energy 1	P3.X High Lift Common Research Model Ecosystem (CRM-HL1)	P1.1 Design of Sustainable Aircraft 2 (Climate Impact)	P1.1 LH2 Fuel Tank Configurations	P1.2 Sustainable Aviation 3	P3.3 Shock Interactions	P5 (Gaudy) EVTOL Concepts	P3.4 Airframe Aeroacoustics	P9 Trajectory Management	P4.1 Structural Measurement Techniques	P4.2 Aeroelastic Tailoring 1	P4.2 Structural Design and Optimization 4	P3.1 High Speed and Cavity Flows	P10 Accident Prevention & Survivability 1	P6.2 Innovative UAV Technologies	P8 Advanced Manufacturing Technology 2	P11 Digital Processes for Non-Destructive Evaluation
	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM-HL2)	P2 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	P3.1 CFD and Sustainable Aviation	P3.1 Low Reynolds Number Aerodynamics	P3.3 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
Thursday September 12	Thu 09:30-12:00 Session 10	GSA Airliner OEM Strategy Overview	P3.X Integrated CFD Validation for Low Speed Aerodynamics	P1.1 Wing Design	P1.2 Supersonic and Hypersonic Aircraft 2	P3.1 Aerodynamic Optimization	P3.3 Boundary Layer Transition & Control	P5 EAP Regulations & Standards: Opportunities and Challenges	P3.4 Airfoil and Wing Performance	P9 Airport and ATC Operations	P4.1 Challenge of High AR Wings 1: Aeroelastic Issues	P4.2 Computational Aeroelasticity 2	P10 Human Factors 1	P5 System-wide Benefits of MW Class Hybrid Electric Aircraft	P10 Morealis	P6.2 UAV Control Systems 1	ICAS Invited: Student Final	P11 Advanced Air Mobility Operations
	Thu 13:00-15:00 Session 11	GSA Airspace & Operational Efficiency	P4.2 Challenge of High AR Wings 2: Design, Aerodynamic and	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 3	P1.2 Unconventional Aircraft	P3.1 Aeroacoustic Analysis	P3.1 Turbulence Modelling	ICAS Invited: ICAS Digital Pioneering Initiative	P3.4 Aerodynamics of Unconventional Configurations	P9 Optimal Operations	P4.1 Bonding / Mechanical Behaviour	P3.2 Aerodynamic Instrumentation and Measurement 2	P4.1 Composites 3	P5 Propellers, Fans & Compressors 4	P10 Navigation, Comms & Radar	P7 Flight Systems Dynamics	P8 Manufacturing & Supply Chain Management	P11 Environmental Impact of Aircraft Operations

ICAS Congress 2024 – AI & Data Focus

Monday September 9	Mon 10:30-12:05 Session 1	GSA Setting the Scene	P1.2 Hydrogen Aircraft 1	P1.1 Aircraft Design	P2 Systems Engineering	P3.1 Applied CFD 1	P3.3 AI-assisted Flow Analysis	ICAS Invited: IFAR Civil Aviation and AAM Initiatives	P3.2 Complex Flow Phenomena	P4.1 Micro-nano Structures	P4.1 Aerostructures	P4.2 Dynamic Loads	P4.2 Computational Aeroelasticity 1	P5 Combustion Heat Transfer 1	P10 Air Taxis	P12 Education and Training Enablers	P11 Future Maintenance Practices	P7 Actuator Systems
	Mon 14:00-15:35 Session 2	GSA Aircraft Concepts & Demonstrations 1	P1.2 Hydrogen Aircraft 2	P1.1 Design Methods	P2 System of Systems 1	P3.1 Applied CFD 2	P3.3 Lift & Flow Separation Control	P3.1 Hypersonic Aerodynamics 1	P3.4 Airframe Aerodynamics 3	P9 AAM 1 - Air Mobility Scenarios and Optimisation	P4.1 Fatigue	P4.2 Structural Design and Optimization 1	P4.2 Experimental Aeroelasticity 1	P5 Combustion Heat Transfer 2	P10 Human Factors 2	P6.1 Flight Controller Design 1	P6.2 UAV Control Systems 2	P7 Energy Supply and Management
	Mon 16:00-18:00 Session 3	GSA Aircraft Concepts & Demonstrations 2	P1.2 Hydrogen Aircraft 3	P1.1 Novel Design and Analysis 1	P2 System of Systems 2	P3.1 Applied CFD 3	ICAS Invited: IFAR Wildfire / Disaster Response	P3.3 Multiphase Flows	P3.4 Airframe Aerodynamics 1	P9 AAM 2 - Airspace Integration	P3.1 Low Speed Aerodynamics	P4.2 Structural Design and Optimization 2	P4.1 AI in Structural Analysis	P5 Combustion Heat Transfer 3	P5 Hybrid Electric Concepts: H2 Architectures	P6.1 Flight Controller Design 2	P6.2 UAV Navigation and Path Planning	P7 Sensors and Test Rig Design
Tuesday September 10	Tue 9:30-12:00 Session 4	GSA Electric and Hydrogen Technology	ICAS Invited: BWB Concept Test and Development	P1.1 MDAO	P2 MBSE	P1.2 Supersonic and Hypersonic Aircraft 1	P3.1 Transition Modeling	P5 Regional Fuel- flexible and Hybrid Flight Demos - Lessons Learned	P3.4 Airframe Aerodynamics 2	ICAS Invited: ERC	P4.1 Impact	P4.2 Vibrations and Damping	P9 Trajectory Planning and Weather	P5 Propellers, Fans & Compressors 1	P5 Hybrid Electric Regional Aircraft Concepts	P4.1 Structural Modelling	P11 Advanced Maintenance Data Management	P7 Systems Safety Aspects
	Tue 14:00-15:35 Session 5	GSA Aerodynamic Technology	ICAS Invited: X-57	P1.1 Novel Design and Analysis 2	P1.1 Hybrid Aircraft Power Systems	P1.2 Sustainable Aviation 1	P3.1 Aeroelastic Applications of CFD	P3.2 Aerodynamics of Rotary Wing and VTOL	P3.4 AI-assisted Airfoil and Wing Performance Predictions	P7 UAV Systems	P4.1 Damage	P4.2 Experimental Aeroelasticity 2	P4.2 Loads and Aeroelasticity of Rotorcraft and Propellers	P5 Propellers, Fans & Compressors 2	P12 Pedagogy in Education	P6.1 Flight Control 2	P6.2 Collaborative and other UAV Operations	P7 Displays and Assistance Systems
	Tue 16:00-18:00 Session 6	GSA Structures and Manufacturing	P3.X Active Flow Control Flight Demonstrations	P1.1 Design of Sustainable Aircraft 1	P1.1 LH2 Aircraft Systems	P1.2 Sustainable Aviation 2	P3.1 Numerical Methods in Aerodynamics	P3.2 High Speed Flows	P3.4 Aerodynamics of Propulsion System Integration	P9 AAM 3 - Vertiports	P4.1 NDT/ Optimisation	P4.2 Adaptive and Morphing Aircraft	P4.2 Structural Design and Optimization 3	P5 Propellers, Fans & Compressors 3	P5 Attainability of Hybrid Electric Vehicles	P6.1 Flight Modelling and Simulation	P8 Advanced Manufacturing Technology 1	P7 Thermal Management
Wednesday September 11	Wed 10:30-12:05 Session 7	GSA Propulsion & Energy 1	P3.X High Lift Common Research Model Ecosystem (CRM- H1.1)	P1.1 Design of Sustainable Aircraft 2 (Climate Impact)	P1.1 LH2 Fuel Tank Configurations	P1.2 Sustainable Aviation 3	P3.3 Shock Interactions	P5 (Gaudy) EVTOL Concepts	P3.4 Airframe Aeroacoustics	P9 Trajectory Management	P4.1 Structural Measurement Techniques	P4.2 Aeroelastic Tailoring 1	P4.2 Structural Design and Optimization 4	P3.1 High Speed and Cavity Flows	P10 Accident Prevention & Survivability 1	P6.2 Innovative UAV Technologies	P8 Advanced Manufacturing Technology 2	P11 Digital Processes for Non- Destructive Evaluation
	Wed 14:00-15:35 Session 8	GSA Propulsion & Energy 2	P3.X High Lift Common Research Model Ecosystem (CRM- H1.2)	P1.1 AI in Systems Design	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 1	P3.1 Hypersonic Aerodynamics 2	P3.3 Lift & Wake Characteristics	P3.2 Aerodynamic Instrumentation and Measurement	P3.4 Propeller Noise and Performance	P9 Climate Impact of Air Transport System	P4.1 SHM	P4.2 Aeroelastic Tailoring 2	P4.1 Composites 1	P5 Supersonic / Hypersonic Propulsion 1	P10 Accident Prevention & Survivability 2	P6.2 UAV Control Applications	P8 Additive Manufacturing	P6.1 Flight Test and Equipment
	Wed 16:00-18:00 Session 9	GSA Propulsion & Energy 3	ICAS Invited: Japanese R&D on GX and DX in Aviation	P1.1 Design of Unconventional Configurations	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 2	CFD and Sustainable Aviation	P3.1 Low Reynolds Number Aerodynamics	P3.3 Fan and Nozzle Flow Control	P3.4 Applications of Aerodynamic Optimization	P9 Airspace Management	P4.1 Structures at Extreme Temperatures	P4.2 Aeroelastic Tailoring 3	P4.1 Composites 2	P5 Supersonic / Hypersonic Propulsion 2	P10 Monitoring	P6.2 UAV Design and Performance	P8 Advanced Manufacturing Technology 3	P6.1 Flight Control 1
Thursday September 12	Thu 09:30-12:00 Session 10	GSA Airliner OEM Strategy Overview	P3.X Integrated CFD Validation for Low Speed Aerodynamics	P1.1 Wing Design	P1.2 Supersonic and Hypersonic Aircraft 2	P3.1 Aerodynamic Optimization	P3.3 Boundary Layer Transition & Control	P5 EAP Regulations & Standards: Opportunities and Challenges	P3.4 Airfoil and Wing Performance	P9 Airport and ATC Operations	P4.2 Challenge of High AR Wings 1: Aeroelastic Issues	P4.2 Computational Aeroelasticity 2	P10 Human Factors 1	P5 System-wide Benefits of MW Class Hybrid Electric Aircraft	P10 Moreals	P6.2 UAV Control Systems 1	ICAS Invited: Student Final	P11 Advanced Air Mobility Operations
	Thu 13:00-15:00 Session 11	GSA Airspace & Operational Efficiency	P4.2 Challenge of High AR Wings 2: Design, Aerodynamic and	P1.2 Unmanned Aerial Systems and Advanced Aerial Mobility 3	P1.2 Unconventional Aircraft	P3.1 Aeroacoustic Analysis	P3.1 Turbulence Modelling	ICAS Invited: ICAS Digital Promoting Initiative	P3.4 Aerodynamics of Unconventional Configurations	P9 Optimal Operations	P4.1 Bonding / Mechanical Behaviour	P3.2 Aerodynamic Instrumentation and Measurement 2	P4.1 Composites 3	P5 Propellers, Fans & Compressors 4	P10 Navigation, Comms & Radar	P7 Flight Systems Dynamics	P8 Manufacturing & Supply Chain Management	P11 Environmental Impact of Aircraft Operations

Evolving Perspectives (2a)

- Relevance of the Learned Society is increasingly misunderstood
 - Time poor, cash rich ⇒ transactional vs intangible benefits
- ICAS works hard to secure engagement:
 - We emphasise the importance of exchange of ideas, information, and understanding to the progress of important research
 - Particularly emerging technologies, for which the wider implications may be only partially understood by isolated early adopters
 - We expose the international research community to challenges and issues through lectures by leading experts in aeronautics and related technologies
 - We support students and early career professionals to develop an international network of colleagues and peers

Evolving Perspectives (2b)

- Relevance of the Learned Society is increasingly misunderstood
 - Time poor, cash rich ⇒ transactional vs intangible benefits
- ICAS works hard to secure engagement:
 - We provide a global network for each of our Members, however large or small
 - We facilitate access to leading figures within the aeronautical community
 - We create bespoke dissemination and discussion opportunities
 - We highlight and reward excellence to an international audience
- We aim to create a vibrant international network that yields increased understanding, appreciation, and tolerance among participants

Strategic Partnerships



- ICAS is proud to cooperate with the following organisations to foster greater exchange of knowledge:



Evolving Perspectives (3)

- Threats to the principles of collaboration
 - National challenges overshadowing global challenges
 - Lessons of 90 years ago being forgotten
- Social media and the demise of the 'expert'
 - "ChatGPT: the democratisation of AI"

Petter Krus, SARC Annual Meeting, June 2023



Thank you!

Feel free to contact the ICAS Secretariat
at icas@icas.org for further information



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