

THE INTERNATIONAL COUNCIL OF THE AERONAUTICAL SCIENCES



Current information



Covering the world of aeronautics

ICAS Family members













SAS





International Council of the Aeronautical Sciences





















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The International Council of the Aeronautical Sciences intends to provide regularly scheduled events and publications that enable a

<u>better understanding of engineering science</u> <u>and practice and an improved level of cooperation</u>

among aeronautical professionals from around the world

STRATEGIC

- Facilitate the exchange of ideas, information, and understanding about the body of aeronautics knowledge among the *international* community so that important research can proceed rapidly
- Expose the *international* research community to challenges and issues through lectures by leading experts in aeronautics and related technologies
- Engage young people in the *global* aeronautical community through special events and prizes
- Create a vibrant *international* network that produces increased understanding, appreciation, and tolerance among participants



OPERATIONAL

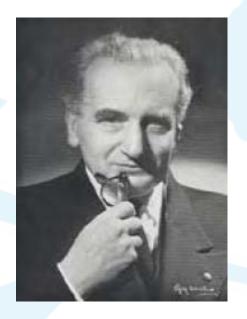
- Implement our objectives through the involvement of appointed representatives of our Member Societies and the valued advice and counsel of our Associated Members
- Provide a biennial Congress to present useful, high quality work from world-wide research and technology organizations to all interested engineers and scientists
- Provide articulate experts to challenge our global community on issues of specific interest to aeronautics

- Provide supporting sessions and papers to meetings of Member Societies and Associated Members upon request
- Provide global recognition for key leaders and researchers in aeronautics through several prestigious awards
- Provide a global platform for early carreer professional and students to begin to develop an international network of colleagues



The early years

In 1957 Theodore von Karman founded ICAS as a non-government not-for-profit scientific organization to encourage the free international exchange of information on aeronautical research and technology





The early years

ICAS Founding members in 1957



VISSION OBJECTIVE HISTORY ORGANISATIO

International Council of the Aeronautical Sciences

ICAS Congresses

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	Spain - Madrid		Israel - Jerusalem		Brazil – Belo Horizonte
1960	Switzerland - Zurich	1990	Sweden - Stockholm	2021	China – Shanghai/hybrid
1962	Sweden - Stockholm	1992	China - Beijing	2022	Sweden –Stockholm
1964	France - Paris	1994	United States - Anaheim	2024	Italy – Florence
1966	United Kingdom - London	1996	Italy - Sorrento	2026	Australia - Sydney
1968	Germany - Munich	1998	Australia - Melbourne		
1970	Italy - Rome	2000	United Kingdom - Harrogate		
1972	The Netherlands - Amsterdam	2002	Canada – Toronto		
1974	Israel - Haifa	2004	Japan – Yokohama		
1976	Canada – Ottawa	2006	Germany – Hamburg		
1978	Portugal – Lisbon	2008	United States - Anchorage		
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		

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Workshop/ ETF-History

- **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 Electrical 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 tbc*

MISSION OBJECTIVE HISTORY ORGANISATION



Organisation



Main Bodies

- Council
- Executive Committee (EC)
- Programme Committee (PC)



Regulatory Documents

- Statutes
- Internal Regulations

International Council of the Aeronautical Sciences

COUNCIL



Council

- "ICAS General Assembly"
- Representation of the Members
- Members of the ICAS EC can not be representatives in the Council
- ICAS President is the Chair of the Council Meeting







Executive Committee (EC)

- "ICAS Management"
- Appointed by the Council
- Voted for a two-year-cycle
- Meets at least twice a year in person

EXECUTIVE COMMITTEE



Executive Committee 2021/2022













- President: Joao Azevedo, Brazil
- PC Chair: Dimitri Mavris, U.S.A.
- Treasurer: Gunnar Holmberg, Sweden
- Past President: Shinji Suzuki, Japan
- Executive Secretary: Axel Probst, Germany

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EXECUTIVE COMMITTEE



Executive Committee 2021/2022













- Chair of the **H**onorary **F**ellows **A**dvisory **G**roup: Murray Scott
- Chair of the Programme Planning Sub-Committee: Chris Atkin
- Chair of the **M**embership & **E**xternal **R**elations SC: Sebastien Remy
- Chair of the Strategic Planning Sub-Committee: Michel Peters
- Members at Large: Xin Guo Zhang Sergej Chernyshev Roland Gerhards Sara Bagassi Faye Collier
- Associated to ICAS EC 2022: Anders Gustafsson

International Council of the Aeronautical Sciences

PROGRAMME COMMITTEE



Programme Committee (PC)

- "ICAS Work-Committee"
- Meets every year
- Members are chosen by qualification (from industry & academia)
- The current members are:

MISSION OBJECTIVE HISTORY ORG

ORGANISATION



PROGRAMME COMMITTEE

A. Alaimo, IT

L. **Alves**, BR

G. A. **Amiryants**, RU

K. **Anderson**, AU

A. **Andreeeva-Mori**, JP

C. Atkin, UK

J.L.F. **Azevedo**, BR

S. **Bagassi**, IT

J. **Bayandor**, AU

E. **Belo**, BR

G. Bezos O Connor, US

C. Bil, AU

A. **Blom**, SE

Ch. **Breitsamter**, DE

P. Camanho, PT

L. Campos, PT

Y. C. **Chen**, CN

F. Collier, US

M. Consiglio, US

S. Conway, US

H. **Djojodihardjo**, ID

B. **Fredriksson**, SE

S. Fu, CN

Y.L. Fu, CN

NEW MEMBERS

Z.H **Gao**, CN

R. Gerhards, DE

T. Gibson, UK

T. G.-Grabowski, PL

Z. Goraj, PL

E. Gowree, UK

D. Gu, CN

G. Halila, BR

J.H. **Han**, KR

M. **Harigae**, JP F. **Haselbach**, UK

G. Holmberg, SE

T. **Ikeda**, JP

A. Isikveren, FR

E. Itoh, JP

L.P. **Jiang**, CN

J. **Juracka**, CZ

M. Kanerva, FI

Y. Kim, KR

B. Kimmel, US

L. Kiszkowiak, PL

A. Krein, DE

P. Krus, SE

M. Lott, BR

L. **Manfriani**, CH

R. Mange, US

F. Marulo, IT

F. Mastroddi, IT

D. **Mavris**, US

J. Melkert, NL J. Mieloszyk, PL

A. Mirzoyan, RU

J. Monk, ZA

R. Mori, JP

D. Mueller-Wiesner, DE

B. **Nagel**, DE

J. Nairus, US

P. Oliveira, PT

M. Padulo, FR M. Peters, NL

O. Pinon-Fischer, US

P. Prakasha, DE

O. Rand, IL

B. Rasuo, RS

K. Rein-Weston, US

S. **Remy**, FR

S. Ricci, IT

K. **Rinoie**, JP

D. **Rohacs**, HU

T. **Rogalski**, PL

C. Mari, FR

M. **Scheidt**, US

P. **Schmollgruber**, FR

M. **Scott**, AU

Y. **Shang**, CN

P. Stezycki, PL

B. **Stoufflet**, FR

E. **Stumpf**, DE

S. **Suzuki**, JP

H. Toebben, DE

P. **Vijgen**, US N. **Viola**, IT

A. Viviani, IT

N. Voevodenko, RU

R. Wahls, US

T. Wan, TW

Y. **Watanabe**, JP

I. **Yimer**, CA

S. Ying, US

X.G. **Zhang**, CN

Y. **Zhang**, CN

D. Zingg, CA

Currently 96 members, as of 29.07.2022

JOHN J GREEN AWARDEE

International Council of the Aeronautical Sciences

SECRETARIAT

ICAS Permanent Secretariat

- ICAS Executive Secretary (currently Axel Probst)
- ICAS Coordinator (currently Bodo Heinrichs)
- Always hosted by an ICAS Member (currently Germany DGLR)



MISSION OBJECTIVE HISTORY ORGANISATION



ICAS Statutes



ICAS Internal Regulations



STATUTES

of the Association

INTERNATIONAL COUNCIL OF THE AERONAUTICAL SCIENCES

Brisbane, September 26, 2012



ICAS Internal Regulations

Related to the ICAS Statutes adopted in 2012

Internal regulations modified Sept 2014 (section IR(C)-01) due to Council decision about new membership fee structure.

International Council of the Aeronautical Sciences

SUB-COMMITTEES

- Programme Planning Sub-Committee (PPSC)
 Chair: individually chosen from EC Currently: Chris Atkin
- Honors & Awards Sub-Committee Chair: Past President Currently: Shinji Suzuki
- Finance Sub-Committee Chair: Treasurer Currently: Gunnar Holmberg
- Strategic Planning Sub-Committee (SPSC) Chair: individually chosen from EC Currently: Michel Peters
- Membership & External Relationship Sub-Committee (MERSC) Chair: individually chosen from EC Currently: Sebastien Remy
- Student Awards Selection Sub-Committee Chair: individually chosen from EC Currently: Karl Rein-Weston
- Early Career Sub-Committee Chair: individually chosen by the EC Currently: Prajwal Prakasha
- Digital Planning Sub-Committee Chair: individually chosen by the EC Currently: Björn Nagel





























MEMBER SOCIETIES





























ASSOCIATE MEMBERS









































































International Council of the Aeronautical Sciences

COOPERATIONS

To achieve its objectives and foster greater exchange of knowledge ICAS proudly cooperates with the following organisations:









MISSION OBJECTIVE HISTORY

ORGANISATION





Odd year (e.g. 2023)

- April: Proposals for Congress Venues +5 years (e.g. 2028)
- May: EC Meeting
- <u>June</u>: Call for papers
- <u>September</u>: Emerging Tech Forum
 & PC meeting
- November: Agreement with 2024 Congress hosting society signed

Even year (e.g. 2024)

- <u>February</u>: Deadline for abstract submission
- <u>February</u>: PC meeting online with discussion of the technical programme
- April: Release of the Preliminary Programme
- May: EC Meeting
- <u>June</u>: Paper upload to Journals
- <u>September</u>: Congress

MISSION OBJECTIVE HISTORY

ORGANISATION



CYCLE TO A CONGRESS

As the 2020 Congress in Shanghai was postponed to 2021, we will have two Congresses in the two-year cycle of 2021-2022 (for the first time in ICAS history)

The 2022 Congress will be held in Stockholm, Sweden:



The 2024 Congress will be held in Florence, Italy



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ORGANISATION

International Council of the Aeronautical Sciences

Topic Areas 2022

- 1. Aircraft Design and Integrated Systems
- 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



AWARDS

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, being awarded to a project or programme in which two or more countries are major participants and which is characterized by substantial technical achievement, scientific or technological advance or benefit to society







ICAS Award for Innovation in Aeronautics

To recognize contributions of an individual or a team in effectively integrating a suite of advanced technologies, combined with new design and/or manufacturing processes, to create a new aeronautical system with significant worldwide impact









Certificate -







AWARDS

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 between scientists, technologists and engineers by their personal participation and involvement in aeronautics



ICAS IFAR Award

To recognize the completeness, actuality and comprehensiveness of a delivered PhD Thesis









MISSION OBJECTIVE HISTORY

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AWARDS

ICAS John Mc Carthy Student Award

To honour students working in scientific research in aeronautics by the quality of content and presentation of which is judged to be the best or second best of the student papers presented at the Congress







ICAS Honorary Fellowship

To honour to individuals who in the opinion of the Council have distinguished themselves by virtue of their exceptional personal contributions, or through exceptional service to the objectives of ICAS over an extended period of time



ICAS Award for Distinguished Service to ICAS

To honour to individuals who in the opinion of the Council have distinguished themselves by virtue of their exceptional personal contributions, or through exceptional service to the objectives of ICAS over an extended period of time



Explanation: The Award includes Lecture



Certificate -







AWARDS

Honorary Fellowship (current members)



Current Chair of the Honorary Fellows Advisory Group: Murray Scott



C.D. Mc Carthy	US	2000	R. Bengelink	US	2012
B.J. Laschka	DE	2002	I. Poll	UK	2012
JP. Marek	FR	2004	A. Gustafsson	SE	2012
S. Kobayakawa	JΡ	2006	D. Müller-Wiesne	rDE	2014
G.M. Carlomagno) IT	2008	M. Scott	ΑU	2016
J. Hefner	US	2008	C. Mari	FR	2018
F. Abbink	NL	2010	S. Ying	US	2021
B. Fredriksson	SE	2010	J. Szodruch	DE	2021

The ICAS Council may grant the status of "Honorary Fellow" to individuals who have distinguished themselves by virtue of their exceptional personal contributions, or through exceptional service to the objectives of ICAS.



THE VALUE OF ICAS

How do we know the latest issues and hot topics in global aeronautical sciences?

Who do we network to gain knowledge of the state-of-the-art developments?

What are the latest and greatest innovations and achievements by the aeronautical communities including industry, academia and research laboratories?



THE VALUE OF ICAS

ICAS provides a *global* support network to each of its Member and Associate Members. Through these societies it provides access to leading members of the world-wide aeronautical community

Through its **global** meetings and programs ICAS provides an opportunity for early career professionals and students to develop an international network of colleagues and peers

ICAS provides significant coverage of the financial risk for the local society involved in the sponsorship of a biennial Congress

MISSION OBJECTIVE HISTORY ORGANISATION



ICAS currently serves as **the only world-wide** supernational organization to represent aeronautical engineering professional societies and associated organizations and their members in 32 countries















SAS



Defence Science and

Technology Group



International Council of

the Aeronautical Sciences





















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DGLR

















































THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY













Thank you for your attention



Should you have any questions, please contact the ICAS Secretariat at icas@icas.org