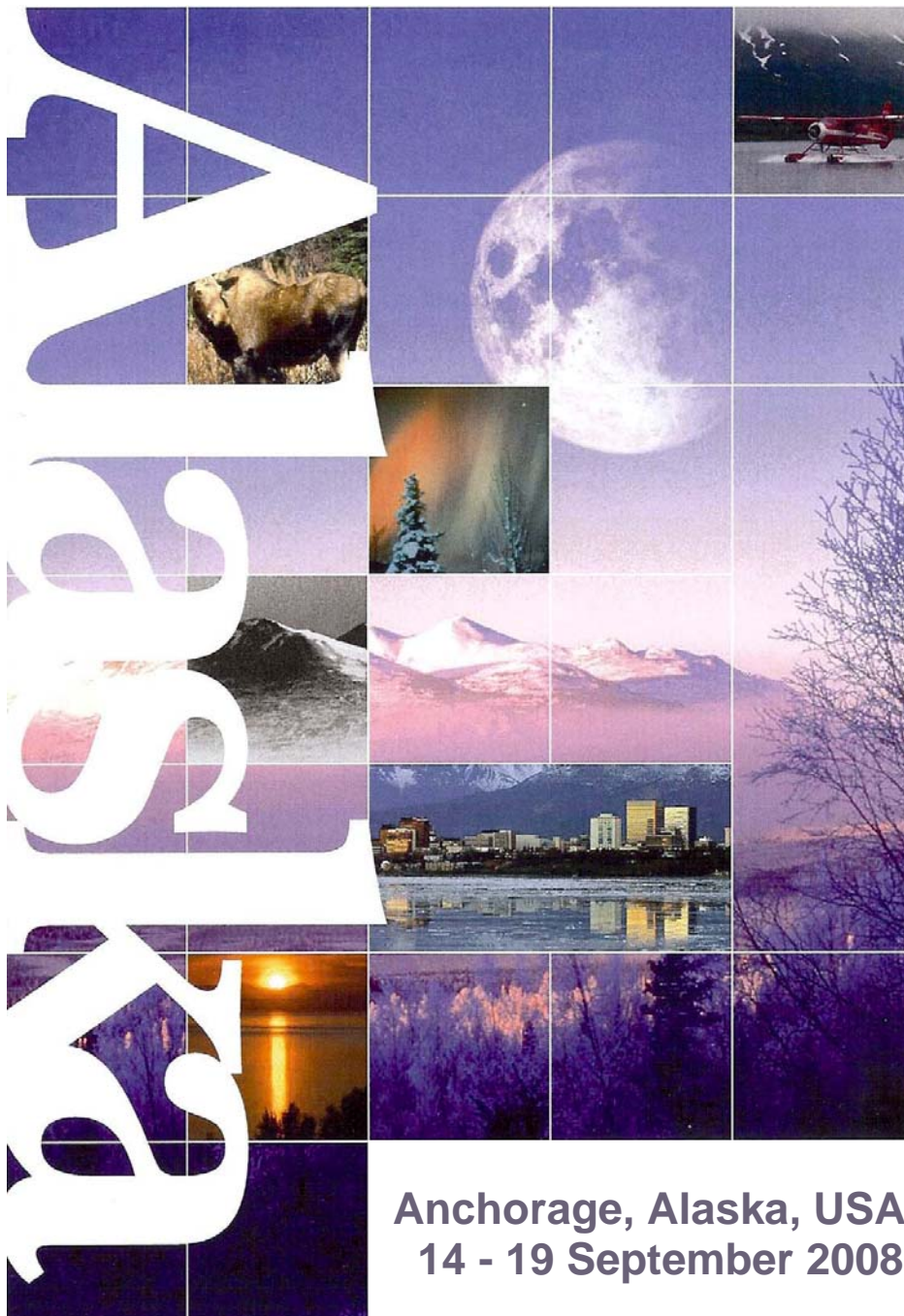


ICAS 2008

**26th Congress of International Council
of the Aeronautical Sciences
Call for Papers**



**Anchorage, Alaska, USA
14 - 19 September 2008**

**Please submit your abstract online at
www.icas.org before 31 July 2007**

Hosted by
AIAA - American Institute of Aeronautics and Astronautics



26th ICAS CONGRESS – Anchorage, Alaska, USA 14 - 19 September 2008

CALL FOR PAPERS

The challenges facing aeronautics have changed and continue to change. The future will require different approaches to the provision of air mobility and air transportation to meet the economic growth and quality of life expectations of all people. The integration of existing and new disciplines will create the concepts of operation and the processes for the design, manufacturing, maintenance and operation of a new generation of air vehicles and supporting systems.

International cooperation will become increasingly more important. The attraction and education of the next generation of scientists and engineers for aeronautics and aviation will be significantly affected by the way that these challenges are addressed.

In recent years, several visionary and strategic documents on the future of aeronautics have been developed. These have focused on societal needs and some key challenges for aeronautics have been identified. Amongst these are improvements in aviation safety and security, reductions in noise and emissions and increases in airspace and airport capacity. The design, development and manufacture of the aircraft and its systems requires complex, multidisciplinary process optimisation, involving a worldwide supply chain. Recognising this, in addition to the usual topic areas, ICAS 2008 will focus on:

- Aircraft design, systems and systems integration
- Air transport system efficiency
- Safety and security
- Challenge of the environment

We are expecting a large number of papers in these areas, since the AIAA Aviation Technology, Integration, and Operations Conference (ATIO) for 2008 will be fully integrated with ICAS 2008 and the ATIO contributions are being included in the ICAS2008 programme.

As a guide to authors, the list of ICAS 2008 topic headings is appended. However, this list should not be regarded as exhaustive and papers from other relevant areas are welcome.

Authors are invited to provide an abstract for a potential paper before 31 July 2007

Congress Programme

The ICAS Programme Committee will assemble a Congress programme with a number of parallel technical sessions and poster presentations. Student presentations (see page 4) will be embedded in the technical sessions. Following the experience of recent ICAS Congresses, the number of oral presentations in the final programme is expected to be about 400. There will also be a number of invited lectures on topics of importance and general interest embedded in the technical sessions. A number of “General Lectures” will be held in the morning and afternoon plenary sessions

Congress Proceedings

All papers that are accepted for presentation (oral, standby and poster) will be included in the CD-Rom proceedings provided that full texts are received before the **15 June 2008**.

Congress venue

The 26th Congress will be held in ANCHORAGE, Alaska, USA. The host and local organiser will be the American Institute of Aeronautics and Astronautics (AIAA) - the ICAS Member Society in the USA. More information about the venue and the logistical arrangements is given on page 6.

We hope to see you at the ICAS 2008 in Anchorage.

Fred Abbink

President

Ian Poll

Chairman Programme Committee

What is ICAS - International Council of the Aeronautical Sciences ?

- ICAS was founded by Theodore von Karman in the mid-fifties as a non-government not-for-profit scientific organization to encourage the free international exchange of information on aeronautical research and technology. At the ICAS 2008 congress we will celebrate the 50-year anniversary (1957-2007).
- ICAS currently serves as the only international support organization to representative aeronautical engineering professional societies, affiliated societies, and associated organizations and their members in 33 countries.
- ICAS organizes a biennial Congress to present useful, high quality work from world-wide research and technology organizations to all interested engineers and scientists.
- Around 800 engineers and scientists from all over the world attended the last ICAS Congress in Hamburg, Germany where around 400 high quality papers were presented.
- ICAS provides a unique opportunity to meet and discuss with colleagues and experts from all over the world. ICAS also provides a global platform for young engineers and students to begin to develop an international network of colleagues.

ICAS Contact information:

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Handling of abstracts

Please submit your abstract online at ICAS website www.icas.org before 31 July 2007.

(Opening of the Website to submit abstracts will take place in May 2007)

Authors are invited to pay careful attention to the presentation and content of their abstract. Knowing that there are more candidates than possible presentations, paper selection for the ICAS Congress is done based on the quality of the abstract only. Some important criteria for the abstract to be selected are scientific/technical relevance, importance to the field and actuality.

Abstracts should be written concisely; include a preliminary title and the opening sentences should indicate the subjects dealt with and the objectives. The abstract should be intelligible and complete in itself. Abstracts should ideally have a length of about two pages including figures and diagrams. When uploading your abstract you will be requested to upload also a short version (about 50 words) to be used in the Congress final programme. Please indicate for which ICAS topic area the paper is intended.

Your abstract should also include author(s) name, affiliation, complete mailing address, telephone and fax numbers, and email address. The number of authors should be limited to three (use acknowledgements if applicable).

At the uploading of your abstract, you should indicate if your paper is intended as an oral or as a poster presentation. Furthermore, it should be indicated if your paper is intended as a student paper.

Poster Presentations

Poster sessions will be organized for the cases where this mode of presentation is preferred by authors or considered more appropriate by the Programme Committee. There is in principle no limitation in number for poster papers and they are selected on their merit only.

Student Presentations

Undergraduate or postgraduate students, who will not have completed doctorate studies by the date of the Congress, may submit an abstract on any topic of the Congress. As far as possible, students must ensure before accepting selection in November 2007 that they can cover their travel and hotel expenses. The two best student papers will be awarded with the ICAS McCarthy Award. To be eligible to take part in the competition for the ICAS McCarthy Award, the abstract and subsequent paper is authored and presented by students only.

Abstract review by Member Societies

The abstracts will be made available to the national Member Societies by the ICAS Secretariat for screening and evaluation and the Member Societies will be asked to submit their recommendations ("not supported, supported, strongly supported") to the ICAS Programme Committee for final evaluation and selection.

NOTE: If there is no national ICAS Member Society in the country, the abstracts will be evaluated only by the ICAS Programme Committee.

The authors will be informed about the acceptance or not of their paper in November 2007.

Full papers should be delivered by 15 June 2008 for inclusion in the CD-Rom proceedings.

Paper review (optional)

For those authors who would wish it, ICAS will provide a paper review by experts from the ICAS Programme Committee. Authors have to indicate when uploading their abstract if they are interested in this process. Papers will be reviewed based on technical content, importance to field, completeness, style and clarity. Papers that successfully pass the review will obtain an ICAS Recommendation letter. Note that, due to the length of such a process, candidates will be requested to supply their full paper by 15 March 2008. This process will enable a feedback from the reviewer(s) in time to make it possible for the author to improve the quality of the paper.

ICAS 2008 TOPIC AREAS

1. Aircraft and Systems Integration

- Subsonic and Supersonic Transport Aircraft
- Military Aircraft and Missiles
- Non-Conventional Aviation Systems and Concepts
- Unmanned Air Vehicles
- Hypersonic Aircraft
- Commuter and General Aviation Aircraft
- Rotorcraft
- Sailplanes and Ultra light Aircraft
- Multidisciplinary Optimization
- Design for Survivability
- Design Education
- New Aircraft Concepts - Military, Civil
- Trans-atmospheric Vehicles

2. Aerodynamics

- Subsonic
- Transonic and Supersonic
- Hypersonic Aerothermodynamics
- High Angle of Attack, High Lift
- Computational Fluid Dynamics
- Transition and Turbulence
- Wind Tunnel and Flight Testing
- Experimental Facilities and Techniques
- Aero acoustics
- Flow Control
- Biologically-inspired flight

3. Materials and Structures

- Composite Materials and Structures
- Applications and Issues
- Metallic Alloys
- High Temperature Materials and Structures
- Structural Mechanics
- Fatigue and Damage Tolerance
- Structural Dynamics and Aeroelasticity
- Dynamic Loading, Acoustic Loading and Impact
- Structural Testing
- Nanotechnology

4. Propulsion

- Gas Turbines
- Propellers and Fans
- Hypersonic Propulsion
- Inlets and Nozzles
- Propulsion / Airframe Integration
- Noise and Emissions (Cf Topic No 10)
- Experimental Facilities and Techniques
- ISABE Supported Session

5. Flight Dynamics and Control

- Flight Dynamics
- Control Techniques and Systems
- Aircraft Handling Qualities
- Flight Testing and Simulation
- Performance and Trajectory Optimization
- Missiles Guidance
- Autonomous operations
- Neural Networks
- System and Parameter Identification

6. Systems, Subsystems and Equipments

- Integration of Equipment Systems
- Power Optimised Aircraft Systems
- Electrical, Hydraulic and Pneumatic Systems
- Avionic Systems
- Landing Gear and Braking Systems
- Auxiliary and Emergency Power Generation
- Aircraft Fuel Systems
- Lightning, Cabin and Water/Waste
- Ice and rain protection
- Advanced Sensor Systems
- Emerging Systems / New Technologies

7. Systems Engineering and Supply Chain

- Integrated Product / Process Development
- Supply chain
- Customer and Product Support
- Life Cycle Value
- CAD / CAM and Computer Integrated Manufacturing
- Information System Technology
- Advanced Information Technology
- Design, Development and Manufacturing
- Engineering Management
- Robotics
- Total Quality
- Automation and Concurrent Engineering

8. Air Transport System Efficiency

- Aircraft Operation and Maintenance
- Flight Management
- ATM and airspace capacity
- Weather effects
- Airport capacity
- Intermodality issues
- SAE Supported Session

9. Safety and Security

- Accident prevention
- Accident survivability, Crashworthiness
- Human-Machine Interface
- Airworthiness and Certification
- Reliability and Maintainability
- Ageing Aircraft
- Aviation Medicine
- Airborne aircraft security
- Airport security

10. Challenge of the Environment

- Reduction of Noise
- Reduction of Emissions
- Alternate fuels
- Operational procedures
- Maintenance and disposal processes



ICAS 2008 in Anchorage, Alaska, USA General Information

The 26th ICAS Congress will be hosted by the American Institute of Aeronautics and Astronautics (AIAA) and will be held from 14-19 September 2008 in Anchorage, Alaska.

About Anchorage

The largest city in Alaska with a population of 254,000, Anchorage is framed on the north by Mt. McKinley and the agriculturally rich Matanuska-Susitna Valley; on the south by the Kenai Peninsula; the east by Prince William Sound; and the west by Cook Inlet and the great Alaska Range. Anchorage is an exciting, spirited, cosmopolitan city with fine restaurants, shops and first-rate entertainment, surrounded by spectacular wilderness. With over 14 hours of daylight per day in September, there is plenty of time to attend the Congress and to enjoy the location. When meeting in Anchorage, Alaska is on the doorstep and a short drive, or flight, takes you into the "Great Land." However, much of Alaska's mystique and beauty can be enjoyed both in, and around, Anchorage itself. Delegates, spouses and their families will be able to experience many attractions either alone or in group tours.

About Congress Venue

The William A. Egan Civic & Convention Centre (www.egancenter.com) is a unique blend of Alaskan hospitality, native art, and modern technology. Built in 1984, this Centre is located in the heart of downtown Anchorage, which makes it convenient for a range of restaurants and shops.

Social Programme

In addition to the Congress receptions and the banquet, the Anchorage Convention and Visitors Bureau will welcome accompanying persons with a presentation on local attractions and activities. They will also assist with booking tours.

Technical visits

During the Congress, field trips will be arranged to places of interest to the technical community. If you plan your flights back from Anchorage via Seattle, you may also visit Boeing.

Registration fee

The congress registration fee, including the CD-ROM Proceedings, is expected to be approximately 650 USD for early registration. This is 10% lower than for ICAS 2006 in Hamburg. Furthermore please note that hotel costs for Anchorage are considerably lower than for Hamburg (20-25%). The lower costs for registration and hotels will compensate for the higher costs of flights to Alaska.

The International Council of the Aeronautical Sciences and the American Institute of Aeronautics and Astronautics look forward to your participation in the 26th ICAS Congress.

Further information can be obtained from:

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