The International Council of the Aeronautical Sciences (ICAS)

A Descriptive Briefing

May 2006
Mission

The International Council of Aeronautical Sciences intends to provide regularly scheduled events and publications that enable a better understanding of engineering science and practice and an improved level of cooperation among aeronautical engineering professionals from around the world
Objectives

- 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 its 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.
Process

- Implement our objectives through the involvement of appointed representatives of our Member Societies and the valued advice and counsel of our Affiliated Societies and Associated Organizations
- 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 and Affiliated Societies upon request
- Provide global recognition for key leaders and researchers in aeronautics through several prestigious awards
- Provide a global platform for young engineers and students to begin to develop an international network of colleagues
Background

- 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.

- 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.
Governance

- ICAS functions under three primary bodies
  - General Assembly (meets biennially)
  - Executive Committee (meets at least twice each year)
  - Program Committee (meets annually)

- The Executive Committee provides the administrative continuity and direction supported by:
  - Full-time Secretariat
  - Finance Subcommittee
  - Strategic Planning Subcommittee
  - Honors and Awards Subcommittee
  - External Relations Subcommittee
  - Membership Subcommittee
ICAS Organization

General Assembly
Representatives of Member Societies

Executive Committee (Board)
Officers (President, Past President, Executive Secretary, Honorary Treasurer, Chairman Programme Committee)
Additional members (2-8)

Programme Committee
- planning of the scientific and technical content of ICAS programmes
- about 50 members
- Supported by the Programme Planning SubCommittee
ICAS Executive Committee
(2005-2006)

**Officers**

President : J. N. Hefner, U.S.A.
Executive Secretary : A. Gustafsson, Sweden
Honorary Treasurer : W. Schmidt, Germany
Chairman Programme Committee : F Abbink, Netherlands
Past President : B. Fredriksson, Sweden

**Members**

R. Bengelink, USA
A. Filatyev, RUS
C. Mari, FR
S. Suzuki, JP
J. Szodruch, DE (associated for ICAS 2006)

G. M. Carломагно, Italy
D. Muller-Wiesner, DE
I. Poll, United Kingdom
M. Scott, AUS
## ICAS Member Societies (1)

<table>
<thead>
<tr>
<th>Country</th>
<th>Society Name</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argentina</td>
<td>Universidad Nacional de Cordoba</td>
<td>Avda. Dr. Velez Sarsfield 1611 X5016GCA Cordoba</td>
</tr>
<tr>
<td>Australia</td>
<td>The Royal Aeronautical Society</td>
<td>PO Box 573 Mascot, NSW 2020</td>
</tr>
<tr>
<td>Belgium</td>
<td>Royal Flemish Association of Engineers</td>
<td>c/o Technological Institute, Aeronautical Section Desguinlei 214 BE-2018 Antwerpen</td>
</tr>
<tr>
<td>Brazil</td>
<td>Associao Brasileira de Ciencias Mecanicas</td>
<td>c/o Centro Tecnico Aerospatial Instituto de Aeronautica e Espaco 12228-904 Sao Jose dos Campos</td>
</tr>
<tr>
<td>Canada</td>
<td>CASI - Canadian Aeronautics and Space Institute</td>
<td>1750 Courtwood Crescent, Suite 105 Ottawa, Ontario K2C 2B5</td>
</tr>
<tr>
<td>People's Republic of China</td>
<td>CSAA - Chinese Society of Aeronautics and Astronautics</td>
<td>No 5 Liangguchang Road Dongcheng District Beijing 100010</td>
</tr>
<tr>
<td>France</td>
<td>AAAF - Association Aéronautique et Astronautique de France</td>
<td>61 avenue du Château 78480 Verneuil sur Seine</td>
</tr>
<tr>
<td>Germany</td>
<td>DGLR - Deutsche Gesellschaft für Luft- und Raumfahrt</td>
<td>Godesberger Allee 70 53175 Bonn</td>
</tr>
<tr>
<td>Greece</td>
<td>Hellenic Aeronautical Engineers Society</td>
<td>3, Karitsi Street 10561 Athens</td>
</tr>
<tr>
<td>Hungary</td>
<td>Scientific Society of Mechanical Engineers</td>
<td>PO Box 433 1371 Budapest</td>
</tr>
<tr>
<td>India</td>
<td>Aeronautical Society of India</td>
<td>13-B, Indrapastha Estate New Delhi - 110002</td>
</tr>
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## ICAS Member Societies (2)

<table>
<thead>
<tr>
<th>Country</th>
<th>Society Name</th>
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</thead>
<tbody>
<tr>
<td><strong>Indonesia</strong></td>
<td>IAAI</td>
<td>Institut Teknologi Bandung Jalan Ganesha 10 40132 Bandung</td>
</tr>
<tr>
<td></td>
<td><strong>Korea</strong></td>
<td>KSASS - Korean Society for Aeronautical and Space Sciences #635-4, Yeogsam-dong, Kangnam-ku, Seoul 135-703</td>
</tr>
<tr>
<td><strong>Israel</strong></td>
<td><strong>Israel Society of Aeronautics and Astronautics</strong></td>
<td>PO Box 2956 Tel-Aviv 61028</td>
</tr>
<tr>
<td></td>
<td><strong>The Netherlands</strong></td>
<td>NVvL Anthony Fokkerweg 2, 1059 CM, Amsterdam</td>
</tr>
<tr>
<td><strong>Italy</strong></td>
<td>AIDAA</td>
<td>Via Nazionale 200 00184 Rome</td>
</tr>
<tr>
<td></td>
<td><strong>Pakistan</strong></td>
<td>The Institution of Engineers Pakistan I.E.P. Bldg., 4th Floor 177/2 Liaquat Barracks Karachi 75530</td>
</tr>
<tr>
<td><strong>Japan</strong></td>
<td><strong>JSASS - Japan Society for Aeronautics and Space Sciences</strong></td>
<td>Meikou Bldg. Bekkan, 1-18-2 Shinbashi, Minato-ku Tokyo 105</td>
</tr>
<tr>
<td></td>
<td><strong>Poland</strong></td>
<td>Polish Society of Aerospace Sciences c/o Warsaw University of Technology ul. Nowowiejska 24 00-665 Warsaw</td>
</tr>
<tr>
<td><strong>Portugal</strong></td>
<td>JNICT</td>
<td>c/o Instituto Superior Técnico Av. Provisos Pais 1069 Lisboa Cedex</td>
</tr>
<tr>
<td><strong>Romania</strong></td>
<td><strong>Commission d’Astronautique de l’Académie de Roumanie</strong></td>
<td>125 Calea Victoriei S.1 71102 Bucaresti</td>
</tr>
<tr>
<td><strong>Russia</strong></td>
<td>TsAGI - Central Aerohydrodynamics Institute</td>
<td>1, Zhukovski Street Zhukovski Moscow Region 140160</td>
</tr>
<tr>
<td><strong>Republic of South Africa</strong></td>
<td>CSIR - Defencetek</td>
<td>CSIR - Defencetek PO Box 395 Pretoria 0001</td>
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# ICAS Member Societies (3)

<table>
<thead>
<tr>
<th>Country</th>
<th>Society Name</th>
<th>Address</th>
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<tbody>
<tr>
<td>Spain</td>
<td>INTA</td>
<td>Institutional Relations Directorate Carretera de Ajalvir Km.4 28850 Torrejon de Ardoz</td>
</tr>
<tr>
<td>Sweden</td>
<td>SSAA - Swedish Society for Aeronautics and Astronautics</td>
<td>PO Box 4207 17154 Solna</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Schweizerische Vereinigung für Flugwissenschaften/SVFW</td>
<td>c/o RUAG Aerospace CH-6032 Emmen</td>
</tr>
<tr>
<td>Turkey</td>
<td>Technical University of Istanbul, Maslak</td>
<td>P.K.9 Taskim Istanbul 80191</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>RAEs - Royal Aeronautical Society</td>
<td>4 Hamilton Place London W1V 0BQ</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>AIAA - American Institute of Aeronautics and Astronautics</td>
<td>1801 Alexander Bell Drive Suite 500 Reston, VA 22091</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Yugoslav Aerospace Society</td>
<td>27, Marta Str. 80 11000 Beograd</td>
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# ICAS Affiliated Societies

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<thead>
<tr>
<th>Country</th>
<th>Society Name</th>
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<tbody>
<tr>
<td>Taiwan, China</td>
<td>AASRC - Aeronautical and Astronautical Society</td>
<td>Room R3-211,No.300, Jhongda Rd., Jhongli City, Taoyuan County 320, Taiwan (R.O.C.)</td>
</tr>
</tbody>
</table>
**ICAS Associates (1)**

Cooperative Research Centre for Advanced Composite Structures Ltd  
506 Lorimer Street,  
Fishermans Bend, Victoria,  
3207 Australia

VKI - von Karman Institute for Fluid Dynamics  
Chaussee de Waterloo 72  
1640 Rhode-St. Genese  
Belgium

Institute for Aerospace Research (IAR/NRC)  
Montreal Road  
Ottawa, Ontario, K1A 0R6  
Canada

ONERA  French Aeronautics and Space Research Center  
BP 72  
92322 Chatillon Cedex  
France

Snecma  
2 bd du Général Martial Valin  
75724 Paris CEDEX 15  
France

DLR – German Aerospace Center  
Linder Höhe  
51147 Köln  
Germany

CIRA – Italian Aerospace Research Center  
Via Maiorise  
81043 Capua (Caserta)  
Italy
ICAS Associates (2)

JAXA - Institute of Aerospace Technology (IAT)
7-44-1, Jindaiji Higashi-machi, chofu-shi
Tokyo 182-8522
Japan

EADS N.V.
Le Carré, Beechavenue 130-132
1119 PR Schiphol-Rijk
Netherlands

NLR - National Aerospace Laboratory
PO Box 90502
1006 BM Amsterdam
Netherlands

ALAC – Air Launch Aerospace Corporation
9 Druzhinnkovskaya Street
123242 Moscow
Russia

CIAM - Central Institute of Aviation Motors
2, Aviamotornaya St.
111116 Moscow
Russia

MAI – Moscow Aviation Institute
4 Volokolamskoye shosse
125993 Moscow
Russia

Russian Academy of Engineering
- Aerospace Section
Novoposelkovaya street 6
125459 Moscow
Russia
### ICAS Associates (3)

<table>
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<th>Company</th>
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<tr>
<td><strong>The Boeing Company</strong></td>
<td>WHQ, Technical Relations</td>
</tr>
<tr>
<td></td>
<td>100 North Riverside, MC 5003-5495</td>
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<tr>
<td></td>
<td>Chicago, IL 60606</td>
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<tr>
<td><strong>Volvo Aero Corporation</strong></td>
<td>USA</td>
</tr>
<tr>
<td></td>
<td>SE-46181 Trollhättan</td>
</tr>
<tr>
<td></td>
<td>Sweden</td>
</tr>
<tr>
<td><strong>FOI – Swedish Defense Research Agency</strong></td>
<td>Texas 76101</td>
</tr>
<tr>
<td></td>
<td>SE-16490 Stockholm</td>
</tr>
<tr>
<td></td>
<td>Sweden</td>
</tr>
<tr>
<td><strong>Swedish Aeronautical Forum (NFF)</strong></td>
<td>6423 B Bryan Blvd.,</td>
</tr>
<tr>
<td></td>
<td>c/o KTH Aeronautics Dept.</td>
</tr>
<tr>
<td></td>
<td>SE-10044 Stockholm</td>
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<td><strong>Honda R&amp;D Americas Inc.</strong></td>
<td>USA</td>
</tr>
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<td></td>
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ICAS links & agreements with other organisations (1)

- SAE (MoU)
- ISABE (MoU)
- CEAS Agreement
**ICAS links & agreements with other organisations (2)**

**Examples ISABE & SAE**

- Provide invited lectures/sessions at each others conferences
- Publication/announcements of Call for Papers

**Resulting in:**

- ISABE & SAE sessions at ICAS congresses
- ICAS sessions at ISABE & SAE conferences
ICAS links & agreements with other organisations (3)

Extract from ICAS – CEAS Agreement

- The objectives of this agreement are to provide a platform for future co-operation between CEAS and ICAS and to ensure that, where the opportunity exists, the two organisations support each other.

- Co-operation will entail the exchange of information on future programme plans, the exercise of best endeavours by both organisations to minimise conflicts and, where appropriate, the promotion of each others activities and publications. The co-operation may in future be expanded to include other activities such as joint sponsorship of conferences and special events, joint honours and awards etc.
ICAS Congress History

1958 Spain - Madrid
1960 Switzerland - Zurich
1962 Sweden - Stockholm
1964 France - Paris
1966 United Kingdom - London
1968 Germany - Munich
1970 Italy - Rome
1972 Netherlands - Amsterdam
1974 Israel - Haïfa
1976 Canada - Ottawa
1978 Portugal - Lisbon
1980 Germany - Munich
1982 United States – Seattle
1984 France - Toulouse
1986 United Kingdom - London
1988 Israel - Jerusalem
1990 Sweden - Stockholm
1992 China - Beijing
1994 United States - Anaheim
1996 Italy - Sorrento
1998 Australia - Melbourne
2000 United Kingdom - Harrogate
2002 Canada – Toronto
2004 Japan – Yokohama
2006 Germany – Hamburg
2008 United States - Anchorage
2010 ??
ICAS Congresses – some statistics

<table>
<thead>
<tr>
<th>Year</th>
<th>City</th>
<th>Number of Participants</th>
<th>Countries represented</th>
<th>Abstracts received</th>
<th>Papers in final programme</th>
<th>Accepted oral</th>
<th>Reserves</th>
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<tr>
<td>1998</td>
<td>Melbourne</td>
<td>554 (+65)</td>
<td>30</td>
<td>521</td>
<td>313</td>
<td>272</td>
<td>26</td>
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<tr>
<td>2000</td>
<td>Harrogate</td>
<td>539 (+93)</td>
<td>34</td>
<td>507</td>
<td>359</td>
<td>279</td>
<td>45</td>
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<tr>
<td>2002</td>
<td>Toronto</td>
<td>522 (+53)</td>
<td>30</td>
<td>509</td>
<td>442</td>
<td>334</td>
<td>75</td>
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<tr>
<td>2004</td>
<td>Yokohama</td>
<td>570 (+80)</td>
<td>30</td>
<td>530</td>
<td>428</td>
<td>338</td>
<td>90</td>
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(1) Figure within bracket = accompanying persons
(2) including additional invited lectures + SAE and ISABE sessions

NOTE: Increase from 7 to 8 parallel sessions for ICAS 2002 and ICAS 2004
Topic Areas - ICAS 2006

- Aircraft and Systems Integration
- Aerodynamics
- Materials and Structures
- Propulsion
- Flight Dynamics and Control
- Systems, Subsystems and Equipments
- Systems Engineering and Supply Chain
- Air Transport System Efficiency
- Safety and Security
- Challenge of the Environment
ICAS Honors and Awards

- Daniel and Florence Guggenheim Memorial Lecture
- von Karman Award for International Cooperation
- Maurice Roy Medal
- John J. Green Award
- John McCarthy Student Awards
- Life Membership
Recent recipients of the von Karman Award

1996: V2500 Commercial Engine Development (U.S.A., United Kingdom)

1998: BOMBARDIER GLOBAL EXPRESS (Canada, Germany, France, United Kingdom)

2000: HYPR Programme (Japan, France, U.S.A., United Kingdom)

2002: F/A18 Follow-on Structural Test Program (Canada, Australia)

2003: X-31 Demonstrator Aircraft Project (Germany, U.S.A.)

2004: GARTEUR Programme (Germany, France, Italy, Netherlands, Spain, Sweden, United Kingdom)
Recent recipients of the Maurice Roy Medal

- 1992  J. SWIHART (U.S.A.)
- 1994  A. YOUNG (United Kingdom)
- 1996  J. WEN MEI (China)
- 1998  R. V. HARRIS (U.S.A.)
- 2000  J. ROEDER (Luxemburg)
- 2002  J. BALAZARD (France)
- 2003  P. SANTINI (Italy)
- 2004  B. LASCHKA (Germany)
Value of ICAS

- ICAS is the only truly global organization supporting the aeronautical engineering professional societies in 33 countries

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

- Through its global meetings and programs ICAS provides an opportunity for students and young engineers 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
ICAS Contact address

ICAS Secretariat
Anders Gustafsson          Phone: +46-8.5550 3151
 c/o FOI                   Mobile: +46-70.373 1196
SE- 16490 STOCKHOM          Fax:     +46-8.5550 3397
Sweden                    Email: secr.exec@icas.org

The ICAS Secretariat is from January 2003 hosted by the Swedish Society for Aeronautics and Astronautics (SSAA).

ICAS Website
www.icas.org