

The International Council of the Aeronautical Sciences (ICAS)

A Descriptive Briefing

Update June 2008



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

(2007-2008)

Officers

<i>President :</i>	<i>F Abbink, Netherlands</i>
<i>Executive Secretary :</i>	<i>A. Gustafsson, Sweden</i>
<i>Honorary Treasurer :</i>	<i>B. Fredriksson, Sweden</i>
<i>Chairman Programme Committee :</i>	<i>I. Poll, UK</i>
<i>Past President :</i>	<i>J. N. Hefner, USA</i>

Members

<i>R. Bengelink, USA</i>	<i>G. M. Carlomagno, Italy</i>
<i>A. Filatyev, RUS</i>	<i>D. Muller-Wiesner, DE</i>
<i>C. Mari, FR</i>	<i>M. Scott, AUS</i>
<i>S. Ying, USA (associated for ICAS 2008)</i>	<i>S. Suzuki, JP</i>

ICAS Member Societies (1)

Australia

**The Royal Aeronautical Society
Australian Division**
PO Box 573
Mascot, NSW 2020

Belgium

Royal Flemish Association of Engineers
c/o Technological Institute,
Aeronautical Section
Desguinlei 214
BE-2018 Antwerpen

Brazil

**ABCM - Associao Brasileira de
Ciencias Mecanicas**
Av. Rio Branco, 124/14
Andar- Centro
20040-001 – Rio de Janeiro

Canada

**CASI - Canadian Aeronautics and
Space Institute**
350 Terry Fox Drive, Suite 104
Kantana Ontario K2K 2W5

People's Republic of China

**CSAA - Chinese Society of
Aeronautics and Astronautics**
No 5 Liangguochang Road
Dongcheng District
Beijing 100010

Czech Republic

Czech Society for Mechanics
c/o Brno University of Technology
Institute for Aerospace
Engineering Technicka 2
616 69 Brno

Finland

**The Finnish Association of
Graduate Engineers TEK**
Ratavartijankatu 2
00520 Helsinki

France

**AAAF - Association Aéronautique
et Astronautique de France**
6, rue Galilée
75782 Paris Cedex 16

Germany

DGLR - Deutsche Gesellschaft für Luft- und Raumfahrt
Godesberger Allee 70
53175 Bonn

Greece

HAES - Hellenic Aeronautical Engineers Society
3, Karitsi Street
10561 Athens

Hungary

Scientific Society of Mechanical Engineers
PO Box 433
1371 Budapest

India

Aeronautical Society of India
13-B, Indrapasthra Estate
New Delhi - 110002

ICAS Member Societies (2)

Indonesia

IAAI

Institut Teknologi Bandung
Jalan Ganesha 10
40132 Bandung

Israel

Israel Society of Aeronautics and Astronautics

PO Box 2956
Tel-Aviv 61028

Italy

AIDAA - Associazione Italiana Di Aeronautica e Astronautica

Casella Postale 227
00187 Roma V. R.

Japan

JSASS - Japan Society for Aeronautics and Space Sciences

Meikou Bldg. Bekkan,
1-18-2 Shinbashi, Minato-ku
Tokyo 105

Korea

KSASS - Korean Society for Aeronautical and Space Sciences

#635-4, Yeogsam-dong,
Kangnam-ku, Seoul 135-703

Lithuania

Aviation Engineers Association

Rodunes kelias 30
LT-02187 Vilnius

The Netherlands

NVvL - Netherlands Association of Aeronautical Engineers

Anthony Fokkerweg 2,
1059 CM, Amsterdam

Poland

Polish Society of Aerospace Sciences

c/o Warsaw University of Technology
ul. Nowowiejska 24
00-665 Warsaw

Portugal

CCTAE - Centro de Ciencias e Tecnologias Aeronauticas e Espaciais
c/o Instituto Superior Técnico
Av. Provisos Pais, 1069 Lisboa Cedex

Republic of Serbia

Serbian Aerospace Society
c/o Faculty of Mech. Engineering
University of Belgrade,
Kraljice Marije 16, 11120 Belgrade 35

Republic of South Africa

AeSSA - Aeronautical Society of South Africa

P.O. Box 14717
Sinoville 0129

Romania

Commission d'Astronautique de l'Académie de Roumanie

125 Calea Victoriei S.1
71102 Bucuresti

ICAS Member Societies (3)

Russian Federation

**TsAGI - Central
Aerohydrodynamics Institute**
1, Zhukovski Street
Zhukovski
Moscow Region 140160

Spain

INTA
Institutional Relations Directorate
Carretera de Ajalvir Km.4
28850 Torrejon de Ardoz

Sweden

**SSAA - Swedish Society for
Aeronautics and Astronautics**
PO Box 4207
17154 Solna

Switzerland

**Schweizerische Vereinigung für
Flugwissenschaften/SVFW**
c/o RUAG Aerospace
CH-6032 Emmen

United Kingdom

RAeS - Royal Aeronautical Society
4 Hamilton Place
London W1V 0BQ

U.S.A.

**AIAA - American Institute of Aeronautics
and Astronautics**
1801 Alexander Bell Drive
Suite 500
Reston, VA 20091

ICAS Affiliated Societies

Taiwan, China

AASRC – Taiwan, China
c/o Center for Aerospace and Systems Technology, Rm 229, Bldg 52,
195-12 Sec.4, Chung Hsing Rd. Chutung, Hsinchu,
Taiwan 310, China

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

VZLU – Aeronautical Research and Test Institute

Beranovych 130
19905 Praha – Letnany
Czech Republic

ONERA - French Aeronautics and Space Research Center

BP 72
92322 Chatillon Cedex
France

SAFRAN

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

ILOT – Institute of Aviation

Al. Krakowska 110/114
02-256 Warsaw
Poland

CSIR - Defencetek

PO Box 395
Pretoria 0001
Republic of South Africa

ALAC – Air Launch Aerospace Corporation

9 Druzhinnikovskaya 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

ICAS Associates (3)

Russian Academy of Engineering

- Aerospace Section

Novoposelkovaya street 6
125459 Moscow
Russia

SAAB AB

58188 Linköping
Sweden

Volvo Aero Corporation

SE-46181 Trollhättan
Sweden

FOI – Swedish Defense Research Agency

SE-16490 Stockholm
Sweden

Swedish Aeronautical Forum (NFF)

c/o KTH Aeronautics Dept.
SE-10044 Stockholm
Sweden

The Boeing Company

WHQ, Technical Relations
100 North Riverside, MC 5003-5495
Chicago, IL 60606
USA

Lockheed Martin Aeronautics

Forth Worth
Texas 76101
USA

Honda Aircraft Company Inc.

6423 B Bryan Blvd.,
Greensboro, NC 27409
USA

ICAS links & agreements with other organisations (1)

- ISABE (MoU)**
- CEAS Agreement**

ICAS links & agreements with other organisations (2)

Example ISABE

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

Resulting in:

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

ICAS Congresses – some statistics (1)

	1998	2000	2002
	Melbourne	Harrogate	Toronto
Number of Participants:⁽¹⁾	554 (+65)	539 (+93)	522 (+53)
Countries represented:		30	34
Abstracts received:	521	507	509
Papers in final programme⁽²⁾:	313	359	442
Accepted oral:	272	279	334
Accepted standby:	26	45	75

(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

ICAS Congresses – some statistics (2)

	2002	2004	2006
	Toronto	Yokohama	Hamburg
Number of Participants⁽¹⁾:	522 (+53)	570 (+80)	837 (+70)
Countries represented:	34	30	42
Abstracts received:	509	530	669
Papers in final programme ⁽²⁾:	442	428	565
Accepted oral:	334	338	414
Accepted standby:	75	90	82
Accepted posters:	33	31	69

(1) Figure within bracket = accompanying persons

(2) including additional invited lectures + SAE and ISABE sessions

NOTE: Increase from 8 to 10 parallel sessions for ICAS 2006

Topic Areas - ICAS 2008

- 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 Workshops

In connection with ICAS Programme Committee meetings (odd years) a workshop with invited speakers is arranged. Themes of recent workshops has been:

- ❑ Towards a Global Vision for Aeronautics (2003)**
- ❑ Towards a Global Vision on Aviation Safety and Security (2005)**
- ❑ UAV-Airworthiness, certification and access to the airspace (2007)**

ICAS Honors and Awards

- Daniel and Florence Guggenheim Memorial Lecture
- von Karman Award for International Cooperation
- Award for Innovations in Aeronautics
- Maurice Roy Medal
- John J. Green Award
- John McCarthy Student Awards
- Life Membership

Recent recipients of the von Karman Award

**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)**

**2006: A-380 Programme
(France, Germany, Spain, UK)**

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)**
- 2006 J. GREEN (United Kingdom)**

Recent recipients of the Award for Innovations in Aeronautics

2006 Robert H. Liebeck (USA) – first recipient

2008

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

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c/o FOI**

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Sweden**

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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

