

The International Council of the Aeronautical Sciences (ICAS)

A Descriptive Briefing

Update June 2010



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 Associates
- ❑ 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 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 30 countries**

Governance

- **ICAS functions under three primary bodies**
 - **Council (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**
 - **Membership & External Relations Subcommittee**

ICAS Organization

Council

Representatives of Member Societies

Executive Committee (= Board)

Officers (President, Past President, Executive Secretary, Treasurer, Chairman Programme Committee)

Additional members (up to 7)

Programme Committee

- planning of the scientific and technical content of ICAS programmes
- about 50 members
- Supported by the Programme Planning SubCommittee

ICAS Executive Committee

(2009-2010)

Officers

President:

I. Poll, UK

Executive Secretary:

A. Gustafsson, Sweden

Treasurer:

B. Fredriksson, Sweden

Chairman Programme Committee:

D. Muller-Wiesner, DE

Past President:

F. Abbink, Netherlands

Members

S. Baillie, CAN

R. Bengelink, USA

A. Filatyev, RUS

J. N. Hefner, USA

M. Scott, AUS

S. Suzuki, JP

C. Mari, FR (associated for ICAS 2010)

S. Ying, USA

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.2 Beiyuan, Andingmenwai
Chaoyang District, Post Box 761-2
Beijing 100012

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

**3AF - Association Aéronautique et Astronautique de
France**
6, rue Galilée
75782 Paris Cedex 16

ICAS Member Societies (2)

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

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

ICAS Member Societies (3)

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 Bucaresti

ICAS Member Societies (4)

Russian Federation

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

Spain

AIAE – Asociacion de Ingenieros Aeronauticos de Espana
Francisco Silvela, 71, Entreplanta
28028 Madrid

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

United States

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

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

ICAS Associates (2)

CIRA – Italian Aerospace Research Center

Via Maiorise
81043 Capua (Caserta)
Italy

University of Naples “Federico II”

Department of Aerospace Engineering

Via Claudio, 21
80125 Napoli
Italy

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 - DPSS

PO Box 395
Pretoria 0001
Republic of South Africa

ICAS Associates (3)

ALAC – Air Launch Aerospace Corporation

9 Druzhinnikovskaya Street
123242 Moscow
Russia

BERIEV Aircraft Company

1 Aviatorov Square,
Taganrog, 347923

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

INTA - National Institute for Aerospace Technology

Carretera de Ajalvir Km.4
28850 Torrejon de Ardoz
Spain

AASRC

Room R3-211, No.300, Jhongda Rd.,
Jhongli City, Taoyuan County 320,
Taiwan, China

ICAS Associates (4)

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

EO&T Enterprise Technology Strategy,
External Technical Affiliations
P.O. Box 3707, MC 03-FR Seattle,
WA 98124-2207
USA

Lockheed Martin Aeronautics

Forth Worth
Texas 76101
USA

Honda Aircraft Company Inc.

6423 B Bryan Blvd.,
Greensboro, NC 27409
USA

National Institute of Aerospace

100 Exploration Way
Hampton, VA 23666
USA

CalPoly College of Engineering

California Polytechnic State University
San Luis Obispo, CA 93407-035
USA

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 | 2012 Australia - Brisbane |

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

NOTE: Increase from 7 to 8 parallel sessions for ICAS 2002 and ICAS 2004

ICAS Congresses – some statistics (2)

	2002	2004	2006	2008
	Toronto	Yokohama	Hamburg	Anchorage
Number of Participants⁽¹⁾:	522 (+53)	570 (+80)	837 (+70)	758 (+65)
Countries represented:	34	30	42	40
Abstracts received:	509	530	669	733
Papers in final programme ⁽²⁾:	442	428	565	588
Accepted oral:	334	338	414	462
Accepted standby:	75	90	82	63
Accepted posters:	33	31	69	63

(1) Figure within bracket = accompanying persons

(2) including additional invited lectures

NOTE: Increase from 8 to 10 parallel sessions for ICAS 2006 and 11 parallel for ICAS 2008

Topic Areas - ICAS 2010

- 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)**
- Aviation and Environment (2009)**

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, UK)**

**2000: HYPR Programme
(Japan, France, USA, UK)**

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

**2003: X-31 Demonstrator Aircraft Project
(Germany, USA)**

**2004: GARTEUR Programme
(Germany, France, Italy, Netherlands, Spain, Sweden, UK)**

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

**2008: Boeing 787 Programme
(USA + partners in Canada, France, Italy, Japan, Korea, Sweden)**

Recent recipients of the Maurice Roy Medal

- 1992 J. SWIHART (USA)**
- 1994 A. YOUNG (United Kingdom)**
- 1996 J. WEN MEI (China)**
- 1998 R. V. HARRIS (USA)**
- 2000 J. ROEDER (Luxemburg)**
- 2002 J. BALAZARD (France)**
- 2003 P. SANTINI (Italy)**
- 2004 B. LASCHKA (Germany)**
- 2006 J. GREEN (United Kingdom)**
- 2008 C. GRAEBER (USA)**

Recent recipients of the Award for Innovations in Aeronautics

2006 Robert H. Liebeck (USA) – first recipient

2008 Alexander Starik (Russia)

Value of ICAS

- ❑ ICAS is the only *truly global* organization supporting the *aeronautical engineering* professional societies in 30 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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The ICAS Secretariat is from January 2003 hosted by the Swedish Society for Aeronautics and Astronautics (SSAA).

ICAS Website
www.icas.org