



COUNCIL OF EUROPEAN AEROSPACE SOCIETIES

CEA



3AF - AIAE - AIDAA-AAAR-DGLR - FTF - HAES- NVvL- RAeS-SVFW-TsAGI-PSAA



CEAS in brief

Fred Abbink
CEAS President

Brussels , 10 December 2014



- 1. CEAS History**
- 2. CEAS Member Societies**
- 3. CEAS Objectives and Activities**
- 4. International Cooperation**
- 5. CEAS Organisation**
- 6. Conclusions**

- Since foundation Europe's main professional aerospace societies serve their individual members with national presentations, symposia, networks and other services
- In 1958 Prof Von Kármán, Chairman of AGARD, founded the International Council of the Aeronautical Sciences ICAS. The UK, German, French, Netherlands, Swedish and Swiss Societies joined ICAS from the start
- In mid 1980s Europe's main professional aerospace societies, after having had bilateral exchanges for long time, and their international Congresses through ICAS, recognized increasing importance of European aerospace business and strength of European industry alliances and decided to develop close working relationships
- This culminated in formation of *Confederation of European Aerospace Societies (CEAS)* at 1992 Farnborough Airshow and official signing of CEAS Constitution at 1993 Paris Airshow

- Later on, in 2003, 8 Constituent Societies realized that deeper collaboration was necessary, which would provide CEAS with legal status and more flexible resources
- New status transformed former Confederation into *Council of European Aerospace Societies (CEAS)* and gave CEAS legal status under Belgian law
- Today CEAS comprises twelve member societies (“trustee members”) with combine over 34.000 individual members

	3AF	Association Aéronautique et Astronautique de France
	AAAR	Asociația Aeronautică si Astronautică a României
	AIAE	Asociación de Ingenieros Aeronáuticos de España
	AIDAA	Associazione Italiana di Aeronautica e Astronautica
	DGLR	Deutsche Gesellschaft für Luft- und Raumfahrt - Lilienthal- Oberth e. V.
	FTF	Flygtekniska Föreningen. Svensk förening för flygteknik och rymdteknik
	HAES	Hellenic Aeronautical Engineers Society
	NVvL	Nederlandse Vereniging voor Luchtvaarttechniek
	PSAA	Polish Society of Aeronautics and Astronautics
	RAeS	Royal Aeronautical Society
	SWFV	Schweizerische Vereinigung für Flugwissenschaften
	TsAGI	Central Aerohydrodynamic InstituteRussian Aerospace Society

Society	Founded	Members*
RAES (UK)	1866	20.000
DGLR (DE)	1912	2700
TsAGI (RU)	1918	4400
AIDAA (IT)	1920	260
AIAE (ES)	1928	2545
FTF (SE)	1933	1675
NVvL (NL)	1941	350
AAAF (FR)	1945	1500
SVFW (CH)	1957	250
HAES (GR)	1975	365
AAAR (RO)	2006	115
PSAA (PL)	2010	120
Total CEAS	1993	34.280

AIAA (USA)	1933	35.000
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- Associate Members
 - Open to European Aerospace Societies with intention of joining as Trustee Members
 - Czech Aeronautical Society (CzAeS)
- Corporate Members
 - Any other public or private entity, willing to support CEAS
 - ESA
 - Von Karman Institute
 - LAETA
 - EUROAVIA



- Conducting integrated programs consisting of specialized and interdisciplinary meetings, dissemination of research and publication of scientific and technical information,
- Encouraging international cooperation through creation of committees, task forces and study groups, and promotion of joint activities with other national and international organisations in aeronautics and astronautics and allied fields
- Publishing CEAS journals and newsletter, as well as books, proceedings and papers dealing with aeronautics and astronautics
- Recognizing outstanding contributions to aeronautics & astronautics by bestowing awards and honours on the contributors
- Effecting cooperation with organizations chartered for similar purposes
- Carrying out other tasks deemed desirable for promoting advancement of aeronautics & astronautics

CEAS provides at an European Level:

- Input into EC Framework Research Programs



- Input onto European Parliament on technical-political issues

- Input into other European Institutions



Education and Culture DG

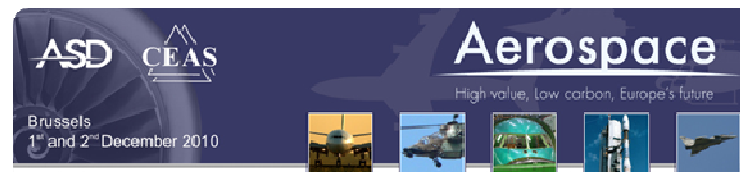
‘Youth in Action’ Programme

CEAS reaches it's objective

“to promote interest of constituent societies on European scale and European aerospace activities internationally”

through organizing:

- Knowledge transfer through organizing technical workshops and symposia
- European Conferences dealing with specific disciplines and broader technical aspects
- Political and technical Bi-annual European Conferences (Europe – Air & Space)



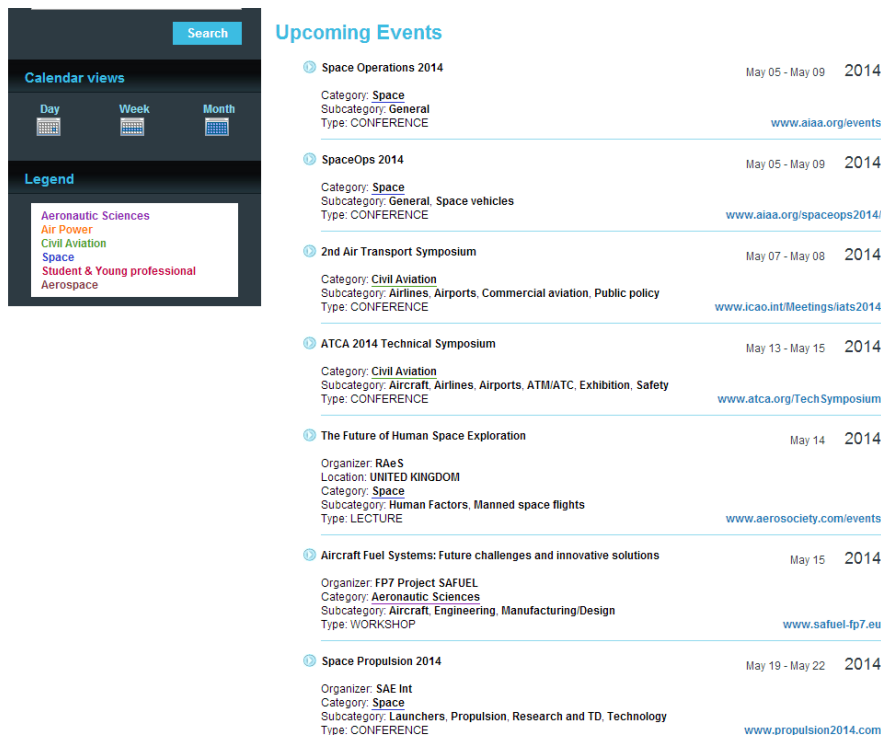
CEAS website (<http://www.ceas.org/>)

CEAS – ASD Conference Programming
Management Information System CPMIS
(<http://www.aerospace-events.eu/>)



The screenshot shows the CEAS website with the following elements:

- Header:** CEAS logo, navigation menu (Home, CEAS Calendar, Hall of fame, CEAS in brief, Specialists' Committees, CEAS Intranet, CEAS Bulletin, Links, Flight Live), and a list of member societies (3AF, AAAR, AIAE, AIDAA, DGLR, FTF, HAES, NVVL, PSAA, RAeS, SVFW, TAAGI).
- News Section:** Includes a "NEWS" header with a date (4/10) and a list of news items with small images and titles.
- CEAS Bulletin:** A section titled "WELCOME TO WEB SITE OF CEAS" with a large image of a group of people and a "Click to read" button.
- ESA Publications:** A section featuring the ESA logo and a list of publications, including "20th AIAA/CEAS Aeroacoustics Conference" and "40th European Rotorcraft Forum 2014".
- Upcoming Events:** A section titled "Upcoming Events" with a list of events, including "Space Operations 2014", "SpaceOps 2014", "2nd Air Transport Symposium", "ATCA 2014 Technical Symposium", "The Future of Human Space Exploration", "Aircraft Fuel Systems: Future challenges and innovative solutions", and "Space Propulsion 2014".
- RAeS 4th Aircraft Structural Design Conference:** A section featuring a large image of an aircraft in a hangar and the text "RAeS 4th Aircraft Structural Design Conference Belfast 7-9 October 2014 | Flyer".
- CEAS Members:** A section showing logos of member societies, including VKI, DGLR, and AA.
- Aerospace Events Calendar:** A section featuring a large image of a calendar titled "AEROSPACE EVENTS CALENDAR" and the text "Conference Programming Management Information System" and "Aerospace Students and Young Professionals".



The screenshot shows the "Upcoming Events" section of the CEAS website. It includes a search bar, a legend for event categories, and a list of events with their details.

Calendar views: Day, Week, Month

Legend:

- Aeronautic Sciences
- Air Power
- Civil Aviation
- Space
- Student & Young professional
- Aerospace

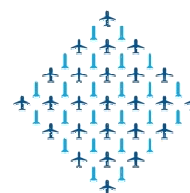
Upcoming Events:

Event	Category	Subcategory	Type	Date	Website
Space Operations 2014	Space	General	CONFERENCE	May 05 - May 09 2014	www.aiaa.org/events
SpaceOps 2014	Space	General, Space vehicles	CONFERENCE	May 05 - May 09 2014	www.aiaa.org/spaceops2014/
2nd Air Transport Symposium	Civil Aviation	Airlines, Airports, Commercial aviation, Public policy	CONFERENCE	May 07 - May 08 2014	www.icao.int/Meetings/ats2014
ATCA 2014 Technical Symposium	Civil Aviation	Aircraft, Airlines, Airports, ATM/ATC, Exhibition, Safety	CONFERENCE	May 13 - May 15 2014	www.atca.org/TechSymposium
The Future of Human Space Exploration	Space	Human Factors, Manned space flights	LECTURE	May 14 2014	www.aerosociety.com/events
Aircraft Fuel Systems: Future challenges and innovative solutions	Aeronautic Sciences	Aircraft, Engineering, Manufacturing/Design	WORKSHOP	May 15 2014	www.safuel-fp7.eu
Space Propulsion 2014	Space	Launchers, Propulsion, Research and TD, Technology	CONFERENCE	May 19 - May 22 2014	www.propulsion2014.com

- 2007 Berlin
- 2009 Manchester
- 2011 Venice
- 2013 Linköping
- 2015 Delft



CEAS 2013
Air and Space Conference
Innovative Europe



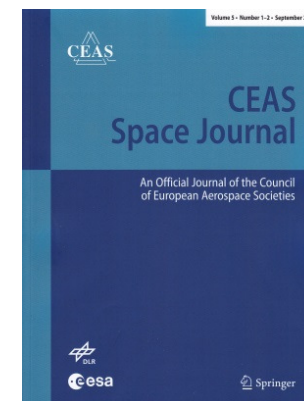
**CHALLENGES
IN EUROPEAN
AEROSPACE**
5TH CEAS AIR & SPACE CONFERENCE

Date	Conference	Venue
Jun-10	16th AIAA/CEAS Aeroacoustics Conference	Stockholm (Sw)
Sep-10	European Rotorcraft Forum (ERF)	Paris (F)
Sep-10	2nd CEAS Air & Space conference	Manchester (UK)
Oct-10	14th Workshop Aeroacoustics of High-Speed Propellers and Open Rotors,	Warsaw (Po)
Apr-11	1st Guidance, Navigation & Control Conference (GNC)	Munich (G)
Jun-11	17th AIAA/CEAS Aeroacoustics Conference	Portland (US)
Jun-11	15th International Forum on Aeroelasticity and Structural Dynamics (IFASD)	Paris (F)
Sep-11	European Rotorcraft Forum (ERF)	Gallerate (I)
Oct-11	15th Workshop Acoustic Liners and Associated Propagation Techniques	Lausanne (Sw)
Jun-12	Aeroacoustics Conference	? (US)
Sep-12	European Rotorcraft Forum (ERF)	Amsterdam (NI)
Sep-12	3rd CEAS Air & Space conference	Venice (I)
Oct-12	16th Workshop on Aeroacoustics installation effects & novel aircraft architectures	Braunschweig (G)
Apr-13	2nd Guidance, Navigation and Control Conference (EuroGNC 2013),	Delft (NI)
May-13	19th Aeroacoustics Conference	Berlin (G)
Jun-13	International Forum on Aeroelasticity and Structural Dynamics (IFASD)	Bristol (UK)
Sep-13	European Rotorcraft Forum (ERF)	Moscow (Ru)
Sep-13	4th CEAS Air & Space conference	Linköping (Sw)
Sep-13	11th European Workshop on Aircraft Design Education (EWADE 2013)	Linköping (Sw)
Sep-13	3rd Symposium on Collaboration in Aircraft Design	Linköping (Sw)
Sep-13	17th workshop 'Atmospheric and ground effects on aircraft noise	Sevilla (Sp)
Jun-14	20th Aeroacoustics Conference AAC	Atlanta (US)
Sep-14	European Rotorcraft Forum (ERF 40)	Southampton (UK)
Sep-14	18th Workshop 'Aircraft noise reduction by flow control and active/ adaptive techniques	Vilnius (Lit)
Nov-14	Symposium on Collaboration in Aircraft Design	Toulouse (F)
Apr-15	Guidance, Navigation & Control Conference (GNC)	Toulouse (F)
Jun-15	21th AIAA/CEAS Aeroacoustics Conference	Dallas (US)
Jul-15	International Forum on Aeroelasticity and Structural Dynamics (IFASD)	St Petersburg (R)
Sep-15	European Rotorcraft Forum (ERF)	Munich (G)
Sep-15	5th CEAS Air & Space conference	Delft (NI)

CEAS reaches its objective

“to foster the visibility and development of aerospace in Europe”
through publications such as:

- Position/ discussion papers on key issues
- Quarterly Bulletins reporting on and advertising activities
- Peer-reviewed articles, published in Scientific/Technical Journals
 - CEAS Space Journal
 - CEAS Aeronautical Journal



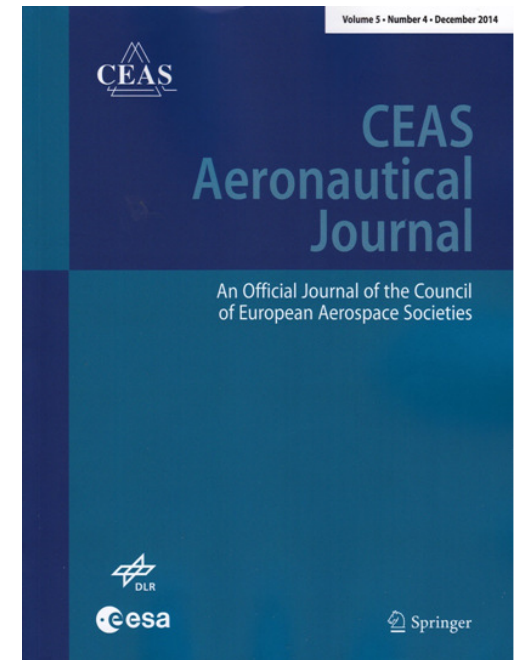
- CEAS Space Journal is devoted to publishing new developments and results in all areas of space-related science and technology including important spin-off capabilities and applications as well as ground-based support systems and manufacturing advancements
- It provides in-depth reviews of status of development in specific areas of relevance to space, and descriptions of potential way forward
- Typical disciplines of interest include mission design and space systems, physical fluid dynamics, materials, aerothermodynamics, environmental conditions and life support systems, Guidance, Navigation and Control systems, propulsion, power, robotics. structures, testing and thermal control



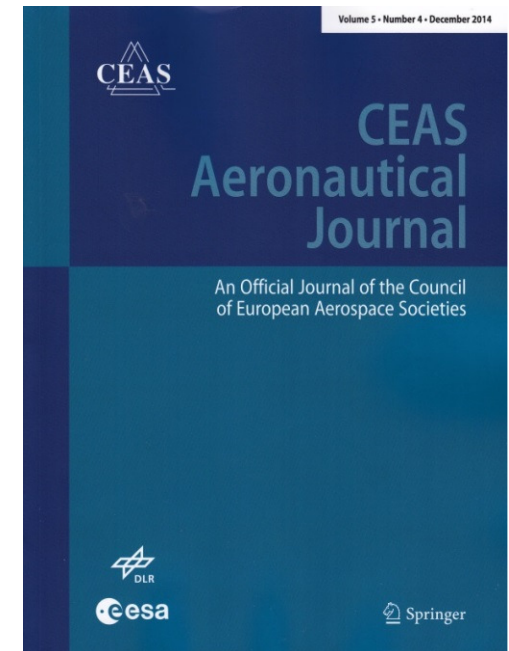
Volume	Date	Nr Articles
Vol 1	Sept 2011	9
Vol 2	Dec 2011	10
Vol 3, Issue 1-2	June 2012	6
Vol 3, Issue 3-4	Dec 2012	2
Vol 4, Issue 1-4	June 2013	6
Vol 5, Issue 1-2	Sept 2013	6
Vol 5, Issue 3-4	Dec 2013	13
Vol 5, Issue 3	March 2014	7
Vol 5, Issue 4	June 2014	5



- CEAS Aeronautical Journal is devoted to publish new developments and results in all areas of aeronautics-related science and technology
- Of interest are (invited) in-depth reviews of status of development in specific areas of relevance to aeronautics, and descriptions of potential way forward
- Topics of the journal are aero-acoustics, aero-elasticity, air transport system, air traffic management, flight mechanics, flight physics/aerodynamics, propulsion, structures and materials, rotorcraft, missiles and UAVs



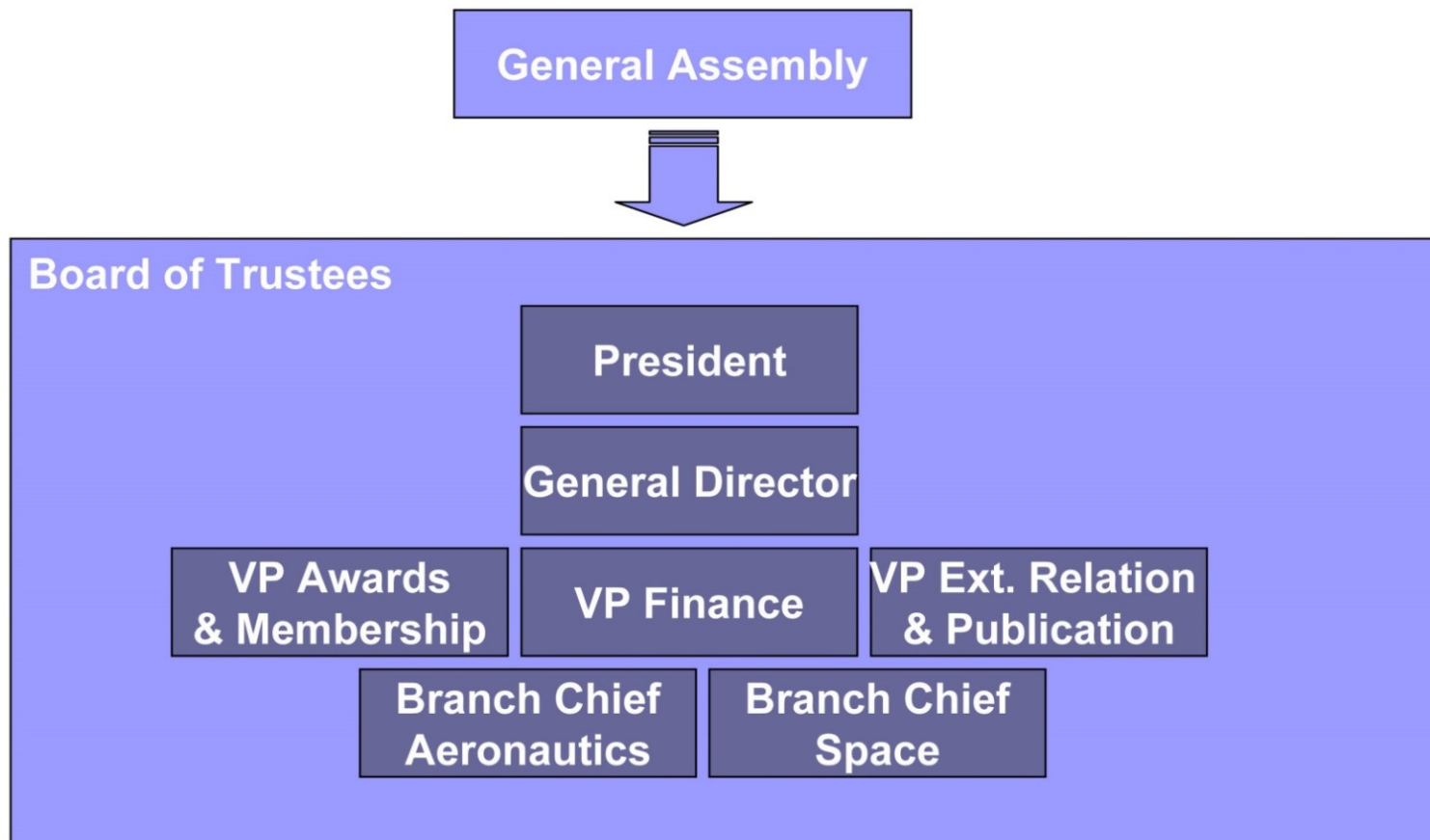
Volume	Date	Nr Articles
Vol 1	Sept 2011	6
Vol 2	Dec 2011	28
Vol 3, Issue 1	April 2012	9
Vol 3, Issue 2-4	Dec 2012	4
Vol 4, Issue 1	April 2013	14
Vol 4, Issue 2	June 2013	6
Vol 4, Issue 3	Sept 2013	8
Vol 4, Issue 4	Dec 2013	8
Vol 5, Issue 1	March 2014	8
Vol 5, Issue 2	June 2014	8
Vol 5, Issue 3	Sept 2014	11
Vol 5, Issue 4	Dec 2014	11



CEAS fosters international cooperation through Memoranda of Understanding with:

- International Council for the Aeronautical Sciences (ICAS)
- American Institute for Aeronautics and Astronautics (AIAA)
- (French) Air and Space Academy (AAE)
- Chinese Society of Aeronautics (CSA)
- Korean Society for Aeronautical and Space Science (KSAS)





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List of CEAS Space Branch Technical Committees

- Structures
- Thermal
- ECLS
- Mechanisms
- Robotics
- Propulsion
- Aerothermodynamics
- Guidance Navigation and Control
- Power
- Mission design and space systems
- Satellite Communications
- Materials

- 7th European Workshop on Thermal Protection Systems & Hot Structures, April 2013, Braunschweig (D)
- Large Deployable Antenna Workshop, Oct. 2013, Noordwijk (NL)
- 15th European Space Mechanisms and Tribology Symposium, Sept. 2013, Noordwijk (NL)



→ 15th EUROPEAN SPACE MECHANISMS
& TRIBOLOGY SYMPOSIUM



25-27 September 2013
DeMuzie Theatre
Noordwijk, The Netherlands
www.esmats.eu



- 10th European Space Power Conference, April 2014, Noordwijkerhout (NL)
- 4th Space Propulsion 2014 , May 2014, Cologne (GE)
- 42nd Aerospace Mechanism Symposium, May 2014, Baltimore (USA)
- 9th Int. ESA Conf. on Guidance Navigation and Control, June 2014, Porto (PO)
- 28th Annual European Space Thermal Analysis Workshop, Oct 2014, Noordwijk (NL)
- Workshop on Additive Manufacturing for Space Application, Oct 2014, Noordwijk (NL)
- 8th Aerothermodynamics Symposium, March 2015, Lisbon (PO)
- 16th Aerospace Mechanism and Tribology Symposium, Se

List of Aeronautical Branch Technical Committees

- Aero acoustics
- Rotorcraft
- Aero elasticity & structural dynamics
- Guidance, Navigation and Control
- Aircraft design
- Integrated Air Transport Operations

List of Aeronautical Branch Networks

- Air transport system
- Avionics
- Cabin systems
- Flight physics
- On-board energy
- Propulsion systems
- Structural design & materials
- Testing / sensors
- UAV

- 19th AIAA/CEAS Aeroacoustics Conference 2013, Berlin, 27-29/05/13
 - 270 Presentations, 375 participants
 - Best paper award
 - Visit to AneCom AeroTest
- 17th workshop 'Atmospheric and ground effects on aircraft noise', Seville, 24-25/09/13
- 20th AIAA/CEAS AAC 2014: Atlanta (USA) as part of "AIAA Aviation 2014", 16-20/06/14
 - 255 papers
 - Hand-out aeroacoustics award to Nigel Peake
- 18th Workshop 'Aircraft noise reduction by flow control and active/ adaptive techniques', Vilnius (Lit), 25-26/09/14
 - 34 participants, 11 papers
- AAC 2015 in Dallas (US)
- AAC 2016 in Lyon (F)





- Poland has joined International Committee as 7th nation in 2012
- European Rotorcraft Forum ERF 39: 2 – 6 Sep. 3-6 2013 in Moscow, Russia (Russian Helicopters, JSC)
 - 119 Presentations, 230 attendees, visit a.o. to Mil Moscow Helicopter Plant
 - MoU with American Helicopter Society (AHS) signed
- European Rotorcraft Forum ERF 40: 2 - 5 Sep 2014 in Southampton (UK)
 - 123 Papers, 238 attendees
- European Rotorcraft Forum ERF 41: 1 - 5 Sep 2015 in Munich (G)
 - Call for papers launched

International Forum on Aeroelasticity and Structural Dynamics

24 – 27 June 2013, Bristol, UK

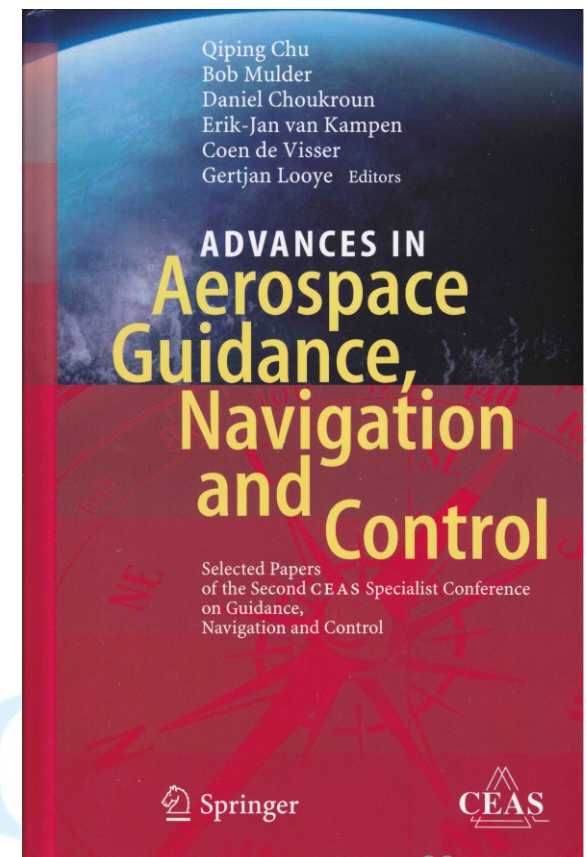


ROYAL
AERONAUTICAL
SOCIETY



- International Forum of Aeroelasticity & Structural Dynamics (IFASD), Bristol, 24-26 June 2013
 - 155 Presentations, 3 keynotes, best paper award
 - 252 Attendees
 - Visit a.o. to Airbus & National Composite Centre
 - RAeS Aeronautical Journal (special edition), selection of papers
- IFASD 2015: St Petersburg (R)
- IFASD 2017: Como (I)

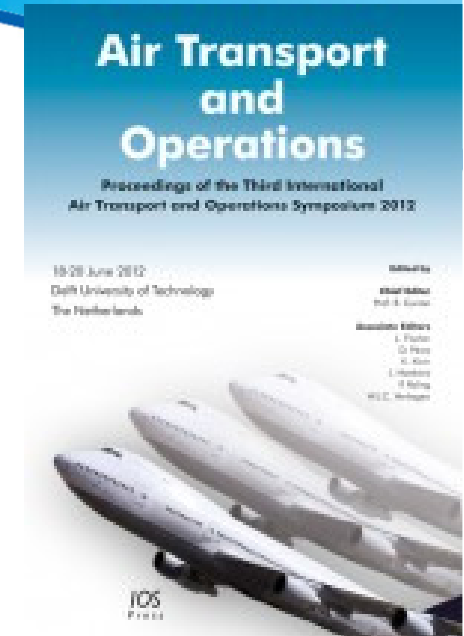
- Combined aeronautics & space 2nd Guidance, Navigation and Control Conference (EuroGNC 2013), Delft, 10-12 April 2013
 - 94 papers & 6 keynote lectures
 - 1 Springer edited book, 137 attendees
- EuroGNC 2015: Toulouse (F)
 - Organisation started
- EuroGNC 2017: Warsaw (P)



- 11th European Workshop on Aircraft Design Education (EWADE 2013), Linköping (Sweden) integrated in CEAS 2013 conference
- 3rd Symposium on Collaboration in Aircraft Design on 19 & 20 Sept 2013 (Linköping University) & first TC meeting
 - Approx. 35 presentations, 70 attendees
- Technical Committee on Aircraft Design (TCAD) Symposium on Collaboration in Aircraft Design, ONERA Toulouse (F), 25-27 Nov 2014



- Common initiative of Prof. Volker Gollnick, DLR Air Transportation System and Prof. Ricky Curran, TU Delft, Aerospace Faculty
- Consists of 7 experts (slowly expanding) equally distributed across Europe
- Homogenous representation of research establishments, academia & industry (airports, airlines, ANSPs, aircraft manufacturers)
- Meet 3 times per year (ATOS conference, spring, autumn)



CEAS reaches it's objective

“to promote the interest of constituent societies on European scale and European aerospace activities internationally”

through:

- Professional Recognition at European Level for its members by providing Directory of European Professionals
- Honors and Awards by offering annual gold medal to recognize outstanding achievements, and medals in technical areas to recognize technical achievement
- Young people's focus by attracting their interest in Aerospace in Europe

- | | |
|-------------------------------|----------------|
| • 1998 Jean Pierson | France |
| • 1999 Walter Kroell | Germany |
| • 2000 Ralph Robins | United Kingdom |
| • 2001 Paulo Santini | Italy |
| • 2002 Fredrik Engstrom | Sweden |
| • 2003 Richard Case | United Kingdom |
| • 2004 Alvaro Azcarrage | Spain |
| • 2005 Rainer Hertrich | Germany |
| • 2007 David Southwood | United Kingdom |
| • 2008 Jean-Paul Bechat | France |
| • 2009 Carl Peter Fichtmuller | Germany |
| • 2010 Ernesto Valerani | Italy |
| • 2011 Stamatios Krimigis | Greece |
| • 2012 Manfred Fuchs | Germany |
| • 2013 Louis Gallois | France |
| • 2014 Fred Abbink | Netherlands |



- EUROAVIA was invited to Board of Trustees meeting in Amsterdam on April 23rd 2010
 - Fruitful discussion followed presentation by EUROAVIA, promotion of scholarships, competitions and other opportunities on student level
 - Mutual cooperation in European events related to students and young professionals
 - Possibility to contact CEAS for support to international events
 - Mutual cooperation to spread EUROAVIA to remaining universities with support of CEAS
 - Use of extensive network of CEAS and EUROAVIA to establish better communication and feedback between students and aerospace industry
- EUROAVIA is now associated with CEAS
- EUROAVIA is invited to CEAS Board of Trustees meetings

CEAS is initiative of European professional Aerospace Societies to cooperate towards

- Providing network of European aerospace professionals
- Sharing knowledge through general and specialist conferences
- Publishing quarterly Bulletin, Journals and Books
- Cooperation through MOUs with ICAS, AIAA, AAE and other international aerospace organizations
- Joint recognition of outstanding European Aerospace Professionals
- Providing support to students and young professionals

CEAS maintains strong relations with the EU and its Framework Programs, CleanSky and SESAR , and organisations as ESA, ASD, ACARE and **EREA**

- Support knowledge exchange between subject matter experts (at European level)
- Strengthening of education and training of students and young engineers in the field of aerospace
- Support to European Institutions (EC, ASD, ACARE, EASA, ESA) in decision making stressing importance of future European aeronautical research
- Increase global visibility of European aeronautical competences (sciences)
- Provide more recognition/awareness for aeronautical sciences as a major field of research
- Enhance scientific and technical quality of events / conferences by aggregating expertise (speakers, program committee membership)
- Increased visibility of European aeronautical events and publications
- Enhance the impact and accessibility of publications relevant to European aerospace community by implementing a policy in the publication domain with focus on open access