

CALL FOR PAPERS

ORGANISED BY :



La Société Savante
de l'Aéronautique et de l'Espace

WITH THE SUPPORT OF :



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Greener Aviation: Clean Sky breakthroughs and worldwide status

BRUSSELS 12TH TO 14TH MARCH 2014

SQUARE, BRUSSELS MEETING CENTRE, MONT DES ARTS, 1000 BRUSSELS, BELGIUM

ABSTRACTS ARE REQUIRED BY 1st OCTOBER 2013
and should be submitted online at www.greener-aviation2014.com

GREENER AVIATION:

Clean Sky breakthroughs and worldwide status

What will the next generation of aircrafts look like? A difficult question to answer without a serious reflection and above all clear guidelines. Following ACARE conclusions, the European Union, along with industry decided that environment should be a major guideline.

Hence the creation of the Joint Technology Initiative Clean Sky, a public-private partnership between the European Union and major European aeronautical companies: started in 2008, up to 2017, gathering more than 500 participants, Clean Sky is the biggest European, aeronautical research programme ever launched.

Despite aircrafts emissions are a small contributor to CO2 global production, their weight is increasing with the growth of aviation traffic. Local environmental impact must also be addressed. This is why Clean Sky scope encompasses all technologies reducing emissions and noise:

- engines, ducted or unducted
- new aerodynamical architectures and drag reduction,
- systems to optimize energy consumption,
- trajectory management
- eco-design for materials and processes,
- to take care of lifecycle management.

The objective of Clean Sky is to bring all these new technologies to a high level of TRL (e.g. 5 to 6), by means of integrated demonstrators, ground based or flight tested.

Although the integrated demonstrators are managed by the main OEMs,

a significant part of the funds is dedicated to innovative SMEs, Research Organisations and Universities through calls for proposal and favoring new entrants and new ideas in the aviation industry.

To monitor the achievement of the environmental objectives, a "technology evaluator" at aircraft, airport and air transportation system levels is designed.

Clean Sky has proven its efficiency and a follow-on, Clean Sky 2, is already under discussion, which should cover the period from 2014 to 2024.

Other, similar endeavors exist all around the world, with similar overall objectives, working at various maturity levels and various timescales.

The timing is therefore appropriate for the organisation of "Greener Aviation: Clean Sky breakthroughs and worldwide status", organised by 3AF in partnership with CEAS during which Clean Sky results and other programmes outcomes will be presented and discussed as well as technical questions still open for discussion.

I look forward to a very stimulating event and to welcoming you all to the first edition of "Greener Aviation: Clean Sky breakthroughs and worldwide status".

Michel De Gliniasty

Chairman - Greener Aviation: Clean Sky breakthroughs and worldwide status

PROGRAMME COMMITTEE

Chairman: Michel De Gliniasty

Former Scientific General Director - ONERA,

Member of the Scientific and Technological Advisory Board of Clean Sky JU

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Weeks	Simon	Rolls-Royce

1) INNOVATIVE ARCHITECTURES

- Aerodynamics :

- Laminar flow wings, airfoils
- Drag reduction of airframe, nacelles and dynamic systems (rotorcrafts)
- Active and passive flow control
- Innovative control surfaces

- Structures :

- Airframe structure
- Load control and alleviation
- Structural health monitoring
- Other

- New configurations

- Open rotor configuration
- Distributed propulsion and other breakthrough configurations

2) PROPULSION

- Engines

- Open rotor
- Geared turbofan
- Ultra high bypass ratio turbofan

- Sub systems

- Combustion chamber
- Compressor
- Turbine
- Intake and exhaust
- Frames and casings
- Other

3) ECODESIGN

- Assessment tools

- Materials and processes

- Raw materials spare
- Low energy consumption
- REACH compliance
- Noxious effluent minimization
- Green repair and maintenance
- Recycling ability
- Biomaterials

4) WEIGHT SAVING

- Light airframe materials

- New Al-Li alloys
- Mg alloys
- Composites

- Engine materials

- Cabin materials

5) NOISE REDUCTION

- Tools, modeling, measurement techniques

- Acoustic panels

- Active systems for internal noise reduction

- Low noise conception

- Rotor
- Propeller
- Landing gear
- Airframe design

6) ON BOARD ENERGY MANAGEMENT

- Thermal management

- Energy management

- Energy management
- Electrical generation/distribution
- WIPS
- Landing system
- Energy recovery

7) GREEN AND SAFE OPERATIONS

- FMS

- Cockpit

- Reduction of pilot workload
- Mission management

- Trajectory management and interface with ATM

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ADVICE TO AUTHORS

- The selected papers will be presented in a 30 minute speech (incl. 5 mins for Q&A).
- An abstract will be selected based on the importance and originality of the subject addressed, on its relevance to the conference theme, on the clarity of its expression.
- The abstract should be a "stand alone" summary that can be used in the compilation of abstracts.
- The abstract should be in English, and no longer than 400 words.
- The abstract should summarize the main objectives of the paper to be presented and outline its conclusions.
- The abstract should be submitted on www.greener-aviation2014.com

PROCEEDINGS AND PAPER PUBLICATION

Authors have the choice of providing an extended abstract of 3-4 pages and/or their presentation for inclusion in the conference proceedings. Please note authors are also given the possibility of publishing their technical paper in the CEAS Aeronautical Journal - this following paper review based on technical content, importance to field, completeness, style and clarity.

ABSTRACT DEADLINE : 1st OCTOBER 2013

LANGUAGE

Please note that the symposium's official language is English. All documents must be in English.

The main purpose of the abstract is to give the Program Committee information to assist them in selecting the papers to be presented at the conference.

ABSTRACT AND PAPER SUBMITTAL MILESTONES :

Abstract Deadline: 1st October 2013
Author Notification: 28th October 2013
Preliminary Programme: Mid-November 2013
2nd December 2013: Online registration opening
Extended Abstract Deadline: 24th February 2014
Final Programme: 24th February 2014
3rd March 2014 : Registration closure

Authors are required to register and settle registration fees by 3rd March 2014

THE CONFERENCE VENUE

SQUARE, Brussels Meeting Centre, Mont des Arts, 1000 Brussels, Belgium
+32 2 515 13 22

SQUARE is housed in the extensive former Palais des Congrès, an elegant, architecturally significant building originally constructed for the 1958 World Expo. Many of the original features, including expansive murals by Paul Delvaux, René Magritte and Louis van Lint, have been carefully restored and are now juxtaposed with contemporary design conceived by a team of leading European designers.

With its spectacular views over the Brussels skyline, SQUARE is somewhere to inspire the mind to greater heights and ambition.



GENERAL INFORMATION

Headquarters of the European Union and the North Atlantic Treaty Organization (N.A.T.O.), Brussels is an international financial centre and home to the European headquarters of over two thousand multinationals. Brussels offers high-calibre scientific resources and has flexible economic infrastructures that have enabled it to keep pace with the great technological changes of the 21st century.

But more than that, Brussels is a compact city, friendly, positive, cosmopolitan and easy to get around. Eating out plays a significant part in Belgian life. Along with the celebrated local cuisine, there are restaurants representing every corner of the globe. Nightlife is lively, with plenty of concerts, bars and clubs, theatre and dance. There is something for everyone. For a major European capital, Brussels is surprisingly eco-friendly too, peppered with parks and green spaces.

A walk through Brussels takes you through a potted architectural history, from ancient medieval buildings to strikingly modern edifices. With official sanction, huge walls in the city are covered in bright murals, outsize homage to the country's many comic book heroes, including Tintin, Lucky Luke, Largo Winch and the Smurfs.

ACCOMMODATION

A large choice of hotels is located within walking distance of the conference centre. For more information please visit www.visitbrussels.be

ACCESS

Right in the heart of Europe, Brussels has superb air, road and rail connections. More than 60 million Europeans live within 300km of Brussels, less than two hours by high-speed train. For those who fly in, it takes only 20 minutes from the airport to the city centre. And when you have arrived, it's easy to move around the compact city, by public transport or on foot.

TRANSPORT

Most public transport in the Brussels-Capital Region is organized by the STIB (Société des Transports intercommunaux bruxellois). The network includes metro lines, which connect the eastern and western districts of the city. Pre-metro lines (trams in the tunnels) complete the metro service. A great many metro lines also have above ground bus and tram connections.

Timetables: 6 a.m. - midnight - please consult the timetables shown at the stops. For more information please visit: <http://www.stib.be>

CURRENCY

The EURO became the official currency of Belgium in 2002, replacing the Belgium franc.

CLIMATE

Brussels has a maritime temperate climate, characterised by warm summers and mild winters. The city has a high average annual rainfall, and visitors can expect a downpour any time of year. Temperatures range from highs of around 80°F (27°C) in summer to 45°F (7°C) during the middle of winter. Snow is possible, but not frequent, in winter.

SPONSORSHIP

Support the international conference on Greener Aviation: Clean Sky breakthroughs and worldwide status and promote your organization to a high level audience.

The benefits of Sponsoring include:

- Be seen as an active participant in all discussions related to a greener aviation
- Confirm your strategy in determining the course for the future
- Promote your organization, its products and programmes to a distinguished, high-level audience.
- Receive recognition as a conference sponsor in all promotional material.
- Network with attendees, many of whom are decision-makers in the industry.

CONTACT

Lisa GABALDI, 3AF Events Director - lisa.gabaldi@aaaf.asso.fr



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de l'Aéronautique et de l'Espace

CONFERENCE SECRETARIAT

3AF: 6, rue Galilée
75016 Paris - France
Phone: +33 (0)1 56 64 12 35
Fax : +33 (0)1 56 64 12 31
Email : lisa.gabaldi@aaaf.asso.fr

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