

GREENER

11TH TO 13TH
OCTOBER

AVIATION

Achievements and perspectives, in Clean Sky and worldwide

2016
BRUSSELS

Call for paper



CONFERENCE

SQUARE,
BRUSSELS MEETING CENTER,

ABSTRACTS ARE REQUIRED BY 15th JUNE 2016
and should be submitted online at www.greeneraviation2016.com



organised by



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

with the support of





Achievements and perspectives, in Clean Sky and worldwide

Aviation is now looking back on over a hundred years of success stories. To continue its tremendous growth in the twenty-first century, it must improve its sustainability. To continue serving the citizens, supporting the economy and linking people and nations, in Europe and worldwide, aviation must reduce its impact on the environment, i.e. on local pollution and noise and on global warming.

This challenge is being tackled by a number of ambitious research programmes throughout the world. In the European Union, the challenge of the environment was identified by ACARE in the early 2000s and has led to unprecedented research activity in the member states and in the Union's framework, with Clean Sky as a flagship programme.

Clean Sky, launched in 2008 under the Seventh Framework Programme for Research and Technology Development (FP7) and now gathering together more than 600 participants, is a public private partnership between the European Union and major European aeronautical companies - it is the largest European aeronautical research programme ever launched. Building on the successes achieved in FP7, the follow-on programme Clean Sky 2 has more than doubled the volume of the initial Clean Sky programme in the current framework programme of research and innovation, Horizon 2020. It will run from 2014 to 2023.

Beyond the core team of Clean Sky 'Members', more than 530 partners, including innovative SMEs, research organisations and universities, have joined Clean Sky by responding to open calls for proposals. The number of participants in Clean Sky 2 is expected to be substantially higher and the programme will

favour new entrants and new ideas in the aviation industry.

After the success of the first Greener Aviation conference, held in 2014, Greener Aviation 2016 will take place at an exciting time: Clean Sky 1 will be close to delivering its final results while Clean Sky 2 demonstrators will be well on their way and will provide preliminary results. By welcoming contributions from other projects, whether EU, nationally or privately funded, and also including non-European projects, the conference will give a unique overview of the abundant - yet structured and streamlined by consistent road-maps - research efforts, worldwide, for improving the impact of aviation on the environment.

The technical sessions will cover all the aircraft, engines, equipment and systems technologies, as well as air transport operations, for reducing greenhouse gases, local pollution and noise.

I invite you to save the dates of 11th to 13th October 2016 and submit your papers before 15th JUNE 2016 for the "Greener Aviation: Achievements and perspectives, in Clean Sky and worldwide" conference, organised by 3AF in partnership with CEAS.

I look forward to welcoming you to the second edition of this stimulating event.

Valérie Guéron

Conference Chair

Conference Objectives

Following the success of its first edition in March 2014, 3AF organizes the second Greener Aviation conference in Brussels, On October 11th to 13th, 2016.

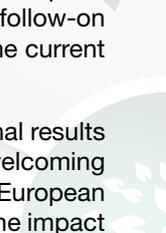
Clean Sky, launched in 2008 and now gathering together more than 600 participants, is the largest European aeronautical research programme ever launched. Building on the successes achieved in FP7, the follow-on programme Clean Sky 2 has more than doubled the volume of the initial Clean Sky programme in the current framework programme of research and innovation, Horizon 2020.

Greener Aviation 2016 will take place at an exciting time: Clean Sky 1 will be close to delivering its final results while Clean Sky 2 demonstrators will be well on their way and will provide preliminary results. By welcoming contributions from other projects, whether EU, nationally or privately funded, and also including non-European projects, the conference will give a unique overview of the worldwide research efforts for improving the impact of aviation on the environment.

The technical sessions will cover all the aircraft, engines, equipment and systems technologies, as well as air transport operations, for reducing greenhouse gases, local pollution and noise.

The programme of the conference will run over 3 days and comprise plenary as well as technical sessions, round tables and debates.

We all look forward to a very stimulating event and to welcoming you to this second edition of "Greener Aviation: Achievements and perspectives, in Clean Sky and worldwide".





ConferenceTopics

ABSTRACTS SUBMISSION will be open online (www.greener-aviation2016.com) from January 2016, until May 2016. Authors are welcome to submit abstracts on the following topics:

Noise reduction

- ▶ Tools, modeling, measurement techniques
- ▶ Acoustic liners
- ▶ Active systems for cabin noise reduction
- ▶ Low noise design
 - Engines and propellers
 - Landing gear
 - High lift systems
 - Airframe design

On board energy management

- ▶ Innovative heat exchanger design
- ▶ Electrical generation/storage/distribution
- ▶ Ice Detection & Protection systems
- ▶ Landing system
- ▶ Energy recovery & harvesting
- ▶ Environmental control systems
- ▶ Actuators

Materials & Ecodesign

- ▶ Assessment tools
- ▶ Materials & processes:
 - Raw materials spare
 - Low energy consumption
 - REACH compliance
 - Noxious effluent minimization
 - Green repair and maintenance
 - Recycling ability
 - Biomaterials

Propulsions

- ▶ Engines:
 - Open rotor
 - Geared turbofan
 - Ultra high bypass ratio turbofan
 - Turbopropulsors
 - Turbohaft engines
 - High OPR engines
- ▶ Sub systems:
 - Combustion chamber
 - Compressor
 - Turbine
 - Intake and exhaust
 - Frames and casings
 - Other

Green and safe systems & operations

- ▶ Flight Management System & Avionics
- ▶ Cockpit
 - Reduction of pilot workload
 - Mission management
 - Human factors
- ▶ Trajectory management and interface with ATM
- ▶ Ground operations & Airport logistics
- ▶ Maintenance

Evaluation of environmental impact

- ▶ Climate change
- ▶ Air quality
- ▶ Noise
- ▶ Tools
- ▶ Other

Passenger experience

- ▶ Cabin
- ▶ ECS

New aircraft configurations

- ▶ Open rotor
- ▶ Distributed propulsion
- ▶ Disrupted configurations
- ▶ Hybrid propulsion
- ▶ Electric propulsion

Aerodynamics and Structures

- ▶ Aerodynamics:
 - Laminar flow wings, airfoils
 - Drag reduction of airframe, nacelles and dynamic systems (rotorcrafts)
 - Active and passive flow control
 - Innovative control surfaces
- ▶ Structures:
 - Airframe structures
 - Load control and alleviation
 - Structural health monitoring
 - Morphing

Alternative fuels

ProgrammeCommittee

Valérie Guénon
Conference Chair

ABBINK Fred	CEAS	HIERNAUX Olivier	THALES AVIONICS
ALBLAS Ruben	KLM	ILG Robert	FRAUNHOFER
AMAND Pierre-Guy	SAFRAN/3AF	INMAN Daniel	UNIV. OF MICHIGAN
BILJ Hester	TU DELFT	KASPAR Josef	VZLU
BOUDJEMAA Fabien	SNECMA	KRYSINSKI Tomasz	AIRBUS HELICOPTERS
CAZALENS Michel	SAFRAN	KYRIAKOPOULOS Michael	EU
CHERNYCHEV Sergei	TSAGI	LAFONTAN Robert	AIRBUS
COLLIER Fayette S.	NASA	MARI Christian	3AF
COLLIN Dominique	SNECMA	NAE Catalin	INCAS
COMES Michel	AIRBUS	NURNEY Keith	ROLLS ROYCE
DAUTRIAT Eric	CLEANSKY	PAGNANO Giuseppe	CLEANSKY
DEMARET Blanche	ONERA	PANTELAKIS Spiros	PATRAS UNIVERSITY
DIMINO Ignazio	CIRA	PETERS Michel	NLR
GRASSO Francesco	CNAM	PROTTI Marco	ALENIA AERMACCHI
GRISVAL Jean-Pierre	ONERA/3AF	RAYCZYCK Georg	LIEBHERR
GUEDOU Jean-Yves	SNECMA/3AF	REYNES Jaime	AIRBUS D&S
GUENON Valérie	SAFRAN	ROETGER Thomas	IATA
HECKER Peter	BRAUNSCHWEIG UNIV.	STOUFFLET Bruno	DASSAULT Aviation
HENKE Rolf	DLR		



- 22 February 2016** Call for paper / opening of system for abstracts submission
- 15 June 2016** Closing system for submission/opening system for registrations
- End June 2016**..... Preliminary program available
- 11-13 Oct 2016**..... GREENER AVIATION 2016

AdviceAuthors

- 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.
- The selected papers will be presented in a 15 minute speech at the conference (+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 and 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.
- Work that has been presented elsewhere, and not updated, will be considered inappropriate.
- All abstracts should be submitted on the Greener Aviation Website (www.greener-aviation2016.com) before 15th June 2016.

Notification of Acceptance/Refusal

The Programme Committee will notify all authors of its decision before mid July 2016.

This notification will be accompanied by detailed instructions allowing authors to prepare and send their paper to the 3AF Secretary by 23rd September 2016.

PLEASE NOTE:

- *Failure to comply with the deadline will entail not having the manuscript included in the conference proceedings.*
- *Participation to the Greener Aviation Award 2016 is granted only if manuscripts are provided by within the deadline.*

ConferenceVenue



SQUARE-BRUSSELS MEETING CENTER
rue Mont des Arts, 1000 Brussel, BELGIUM

<http://www.squarebrussels.com>

3AFContact

6, rue Galilée, 75016 Paris – France
Phone: +33 (0)1 56 64 12 30
Fax : +33 (0)1 56 64 12 31

ga2016@aaaf.asso.fr

www.greeneraviation2016.com