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Greener Aerospace Innovative Technologies and Operations for a human friendly environment

FEATURING

CEAS AIR & SPACE
7th Edition

3AF GREENER AVIATION
3rd Edition

AIAA/3AF ANERS
8th Edition

BORDEAUX, FRANCE | 25-28 FEBRUARY 2020

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To pave the way for a single European aerospace conference, 3AF and CEAS have decided to join forces to launch the very first edition of the Aerospace Europe Conference (AEC2020).

Aerospace Europe Conference 2020, will feature 3AF 3rd Greener Aviation, CEAS 7th Air & Space Conference and the 8th edition of Aircraft Noise and Emissions Reduction Symposium (ANERS).

This conference will be offering scientists and engineers from industry, government, and academia an exceptional opportunity to exchange knowledge and results

of current studies and to discuss directions for future research in the fields of aeronautics and space. Individually, Each of the three conferences has proven to be very successful. In joining the three we expect to be even more attractive, offering additional transversal topics and synergies between aeronautics and space towards a greener and cleaner environment

By welcoming worldwide contributions, this new conference will give attendees a unique overview of the global research efforts aimed at reducing the environmental impact of aviation and space activities.

3AF Greener Aviation

To continue serving citizens, linking people and nations worldwide, aviation must reduce its impact on the environment. This challenge is being tackled by a number of ambitious research programmes throughout the world. In the European Union, the challenge of the environment for aviation 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. Since 2008, Clean Sky and Clean Sky 2 have involved more than 1000 participants in a public private partnership between the European Union and major European aeronautical companies in order to drastically reduce local pollution, noise and global warming emissions due to aircraft, helicopters, and their operations.

The 3rd Greener Aviation conference will build on the successes of two previous editions focussed on scientific and technology solutions for aircraft and their systems, pulled by the Clean Sky programme.

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.

AIAA / 3AF ANERS

The Association Aéronautique et Astronautique de France (AAAF) and the American Institute of Aeronautics and Astronautics (AIAA) are pleased to announce that the 8th edition of the Aircraft Noise and Emissions Reduction Symposium (ANERS) will occur on 25-28 February 2020 in Bordeaux, France.

Supporting the development of a long-term vision, the objective of this high-level technical Symposium is to review challenges and opportunities faced by manufacturers, local communities, air carriers, airports, governmental institutions, and non-governmental organizations in addressing noise and emissions abatement and to discuss holistic solutions that will alleviate the pressures associated with air traffic.

CEAS Air & Space

The Council of European Aerospace Societies (CEAS) is pleased to announce that its 7th Air & Space Conference is embedded in the first European Aerospace Conference to be held in Bordeaux.

Today space has become everyday infrastructure, and much more besides. Space enables activities and gives access to information of a very diverse nature, delivering pure economic value as well as societal benefits of short, medium and long duration for all European citizens. Space 4.0 represents the evolution of the space sector into a new era. To meet the challenges in front of us and to pro-actively develop the different aspects of Space 4.0, the European space sector must become globally competitive. The integration of space into the European society and economy shall be maximized and European autonomy in accessing and using space in a safe, secure, clean and green environment shall be secured, parallel to the provision of excellence in space science and technology.

The deployment of connected objects is transforming the aeronautics industry. This affects the manufacturing process with new tools and services that will reduce production costs. The European aeronautics industry is investing both in technology and skills to sustain its position in a global market. The Internet of Things is a key enabler of the Industry 4.0 trend. The trend is building on digital technologies like Big Data, Artificial Intelligence and digital practices like cooperation, mobility and open innovation.

Representing Europe's foremost aeronautics & space community (Aerospace Europe) it is our aim to further the advancement of aerospace sciences and engineering by addressing the topics mentioned below at the conference.

The core theme of AEC2020 is **GREENER Aerospace**.

AEC2020 TOPICS

AERONAUTICS

- Aerodynamics, laminarity
- Materials & Structures
- Propulsion, including emissions reduction
- Aircraft Noise reduction - External Noise and Internal noise
- New aircraft configurations (special session)
- Electric and hybrid aircraft
- On board energy management
- Alternative fuels and power sources
- Ecodesign and green life cycle
- Urban air mobility and its impact on the environment
- Autonomous Aircraft and its impact on environment (AI, connectivity...)
- Green and safe systems & operations
- Evaluation of environmental impact
- Research infrastructures for greener and safer aviation

SPACE

- Materials and Advanced Manufacturing for Space Applications
- Aero-thermo-dynamics
- Clean Space, Space Debris
- Environmental Control & Life Support in Space
- Guidance, Navigation and Control GNC
- Structures, Thermal and Mechanisms
- Mission Design and Space Systems
- Software and Avionics
- Optics, Optoelectronics and Photonics
- Power
- Robotics
- Spacecraft Design
- Space Propulsion (green propellants)
- Satellite Communications
- Satellite Operations
- Testing

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CONTENTS

Volume 123 Number 1265

July 2019

**Integral performance optimization for the two-stage-to-orbit
RBCC-RKT launch vehicle based on GPM**

L. Zhang, M. Sun, Q. Cheng, Z. Chen and X. Zhang 945

**Vertical flight profile optimization for a cruise segment with RTA
constraints**

R. Dancila and R. Botez 970

Revisiting the combinatorics of lifting line and 2D vortex lattice theory

M.A. Yukish 993

**Stagnation pressure effect on the supersonic minimum length
nozzle design**

T. Zebbiche 1013

**Effect of scramjet inlet vortices on fuel plume elongation and
mixing rate**

J.R. Lobet, R.J. Gollan and I.H. Jahn 1032

Exact pitch and heave flutter for the complex Theodorsen function

S.P. Farthing 1053

A linear guide-based actuation concept for a novel morphing aileron

G. Amendola, I. Dimino, A. Concilio, R. Pecora and F. Amoroso 1075

Front Cover: Artist's illustration of Orbital ATK's proposed OmegA rocket.
(Orbital ATK)