TSAS2025

"Towards Sustainable Aviation" *Summit*

Toulouse • France - January 28-30, 2025

NEW DEADLINE FOR ABSTRACT SUBMISSION
SEPTEMBER 30, 2024

CALL FOR PAPERS

WWW.3AF-TSAS.COM

All these organisations were partners of TSAS 2022 edition

sesar JOINT UNDERTAKING

dgac direction générale de l'Aviation civile

CLEAN AVIATION

3AF Association Aéronautique et Astronautique de France

AIRBUS ROLLS ROYCE SAFRAN LIEBHERR PRATT & WHITNEY

isae SUPAERO Institut Supérieur de l'Aéronautique et de l'Espace

La Région Occitanie Pyrénées · Méditerranée

MAIRIE DE TOULOUSE

3AF, the French Aerospace Society, presents Towards Sustainable Aviation, an International Summit, held on 28 to 30 January 2025, in Toulouse - France.

In 2022, TSAS first edition gathered 200 experts issued from 16 countries for 95 presentations reviewed in 27 technical sessions, 8 round tables and/or Keynotes. As a reminder TSAS is regrouping former AEGATS and Greener Aviation conferences held in 2016, 2018 and 2020 and organised by 3AF with the support of Cleansky, Sesar, AIAA and CEAS.

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3AF
Association Aéronautique et Astronautique de France

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OBJECTIVES

This conference will address both aircraft design and operations perspectives to prepare and shape a more efficient Global Air Transport System with the aim to reach carbon neutrality by 2050 for the aviation ecosystem.

A more eco-efficient aircraft would provide more Net Present Value, with, on one hand, a significantly improved environmental footprint via new design and technologies, and on the other hand, using drop in and non-drop-in SAF and potentially new ways of operating aircraft. As a result, the aircraft design would enable to reduce dramatically the operating costs, the cost of ownership, to be sustainable and competitive versus other transportation alternatives, while increasing revenue through cabin services and enhanced aircraft operability.

The ambition for carbon-neutral growth for aviation has open a new era for the aviation ecosystem and new opportunities to meet these new challenges. TSAS 2022 edition highlighted new technologies such as hydrogen propulsion systems, high aspect ratio wing, new systems and materials, new propulsion systems, advanced ATM...

TSAS 2025 will collect progress made since former edition on the previous technologies, but also focus on SAF, more electrical aircraft, more autonomous aircraft and some emerging technologies or approaches such as the Artificial Intelligence and the digital transformation of the industry, including the intensive use of big data. And finally, Security which has not to be seen as a threat but as an opportunity for improvement.

CONFERENCE TOPICS

ECO-DESIGN AIRCRAFT

- Basic objectives for an aircraft eco-design
- Aircraft configuration, emerging technologies and innovative architectures
- New energies and their management Impact on aircraft configuration and design
- Fuel burn
  - Weight
  - Aerodynamic
  - Multi-disciplinary design
  - Systems including on-board energy management and AI opportunities.
- Other contributing items e.g., Operating Costs reduction, Revenue service increase, Airborne system acceptability and affordability
- Environment
- Security
- Post COVID Cabin design and air quality
- In Flight connectivity and potential additional ancillary revenues
- New methods and tools for end-to-end safety assessment and certification using modelling and simulations.

OPERATIONS

- Aircraft
  - Ground operations
  - Maintenance and maintenance predictive
  - Flight operations
  - Post COVID remaining issues
- From "ATM" to "The digitalization of the infrastructure supporting aviation" and the reliance on strong air/ground system integration
  - Hyper connectivity and Machine to Machine applications
  - Lead time reduction DevOps
  - Single Pilot Operations
  - Digital cockpit and ground assistants
  - Certified AI for better airborne operations
  - "Zero waste" trajectories
  - New ways of flying
- Airport
  - Connection from home to airport
  - Post-COVID remaining issues
  - Airport design for passenger's flow efficiency
  - Airport Security
  - Ground handling
  - New energies deployment
- Integration of Safety Management Systems
- Cross-fertilization between security and safety standards

NEW INDUSTRY SET-UP

- How Artificial Intelligence push boundaries in design, operations, organization and safety risk management
- Anticipated new boundaries within engineering and between engineering and manufacturing due to new technologies and MRO repercussions, subsequently.
- Post-COVID airlines panorama

ENERGY AND PROPULSION

- Energy overview and opportunities: New Energy sources, SAF production pathways, emission impacts, mission optimisation, next generation integration
- Gas Turbine Propulsion: New Architectures, Hybridisation, Energy Management, Aerodynamics, Revolutionary Cycles
- Hydrogen powered Propulsion: Propulsion Technologies, Aircraft Architecture, Storage, Fuel Distribution
- Hybrid-Electrical and Electrical Aircraft: Aircraft Architecture, Storage, Fuel/Energy Transfer and Utilisation
- Impact of technological breakthrough on safety risks, standards, regulations and certification

CONFERENCE SCHEDULE

Deadline for Abstracts submission	*NEW!*	*September 30th, 2024*
Notification of acceptance to Authors		*Mid October 2024*
Preliminary Programme		*October 11th, 2024*
Online registration opening		*October 11th, 2024*
Papers submission deadline		*December 16th, 2024*
Final Programme		*January 5th, 2025*
Towards Sustainable Aviation Summit		*January 28 -30, 2025*

ADVICE TO THE AUTHORS

- 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.

At the end of TSAS conference, the Program Committee will award the best papers for two categories : Academic and Industry.

- The selected papers will be presented in a 20 minute speech at the conference (including 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.
- Work that has been presented else where, and not updated, will be considered inappropriate.
- All abstracts (PDF files) and bio data (date and place of birth) of the main author should be uploaded on the conference website www.3af-tsas.com before **September 30, 2024**.
- All information concerning the deposit of abstracts are available on the website : www.3af-tsas.com

Notification of Acceptance/Refusal

The Programme Committee will notify all authors of its decision **by mid October 2024**.

This notification will be accompanied by detailed instructions allowing authors to prepare and send their paper to the 3AF Secretary by December 16th, 2024.

Please note that failure to comply with the deadline will entail not having the paper included in the conference proceedings.

THE CONFERENCE VENUE

TSAS2025 will be held in the Pierre Baudis Congress Centre, Toulouse, France.

Pierre Baudis Congress Centre
11, Esplanade Compans Caffarelli 31685 Toulouse

www. centre-congres-toulouse. fr

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SNCF Gare Toulouse Matabiau

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