

Technical challenges for aviation in a changing environment

will be held 18-21 November 2013 in Berlin, Germany.

It will present state-of-the-art research and provide high-level exchange, to identify topics and partnerships for future collaborative research.

Recent advancements in science will be presented, jointly with open issues and challenges for the aviation community. Proposals for how to overcome current challenges will be discussed. This is well timed to respond to the first Call for Horizon 2020 which will be published end of 2013 or early 2014.

Scientific Conference Programme

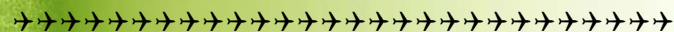
The Scientific Programme will be developed around five key areas:

1. **Alternative fuels – mitigation options**
2. **Climate impact of aviation emissions**
3. **Aviation environmental modelling and databases**
4. **Optimal flight trajectory: climate & safety**
5. **Atmospheric observation for aviation safety**

Contributions relating to above key themes are welcome. Detailed information on abstract submission and abstract guidelines are available on the ECATS web-site. Reduced registration fees are available for ECATS members and for early bird registrations.

Abstract submission (300 words) – 5 August 2013
Early bird registration – 10 August 2013

During the conference oral and poster presentations will be possible. A preference (oral/poster) can be given with submission of abstract. After the event a special issue including extended abstracts for invited contributions in a peer-reviewed journal will be prepared.



Alternative fuels – mitigation options

Increasingly the transport sector is under pressure to diversify away from petroleum derived fuels for its energy; for aviation, alternative fuels are the most realistic mitigation option. This session will explore technical, operational and performance challenges and opportunities, with specific focus on the environmental consequences of using the new fuels. Additionally it will seek to identify knowledge gaps to be filled to overcome shortcomings of, or exploit benefits of, alternative fuels.



Climate impact of aviation emissions

Aviation contributes to climate change and a joint effort is necessary to ensure both sustainable mobility and growth of aviation. However, large uncertainties remain when quantifying overall climate change from aviation. We focus on contributions which emphasise the need to establish solid knowledge and well-evaluated measures and means, to provide quantitative estimates of aviation climate change. Which approach is best suited to help aviation identify a durable path into the future?

Aviation environmental modelling and databases

Well-balanced sustainable aviation policymaking requires proper assessment of potential economic and environmental impacts of any technical, operational and or market based measure. To facilitate implementation of such aviation environmental policies, a model-based assessment is often applied, ideally with open access to necessary databases. At the conference, the European and international perspectives and contributions to integrated modelling and analysis of complex interdependencies and trade-offs will be discussed at air vehicle, airport and or air transport system levels.



Optimal flight trajectory: climate & safety

Finding the optimal flight trajectory remains one of the main challenges for air traffic management (ATM). Any trajectory has to comply with a growing list of requirements, amongst others safety and climate impact. Recent advancements in this field are invited which aim to expand current capabilities related to one or more of above mentioned key performance areas. Linkages with the Aviation System Block Upgrades are considered as defined in the ICAO Global Air Navigation Plan: 2012.

Atmospheric observation for aviation safety

For the safety and efficiency of European aviation the knowledge on potentially harmful atmospheric conditions plays a crucial role. Existing infrastructures for the monitoring of atmospheric conditions including chemical species, particles and clouds, e.g. by commercial aircraft or ground stations, are in place. The session reviews the current state of development and future concepts and explores how these infrastructures may help improving weather forecast, aviation efficiency and aircraft maintenance schedules.

Show case for early career researchers

The conference will offer the opportunity for early career researchers, typically having recently completed doctoral R&D to present innovative research initiatives and ideas. Details and participation rules will be available in July 2013 on the ECATS web-site:

www.ecats-network.eu

Available slots will be awarded as a result of an assessment procedure and will allow successful candidates to identify strategic contacts and cooperation partners.

ECATS International Association

From Network to Association In 2005 a network of more than 100 researchers in the domain of aviation and environment was established within the Network of Excellence ECATS (Environmental Compatible Air Transport System). In 2010, the International Association, ECATS IASBL was established in Brussels, Belgium with the objective of helping to make future aviation sustainable.

Association Scope Objectives are to build up expertise, to exploit multi-disciplinary platform, to organise exchange of knowledge, and to foster the technical, strategic and political debate.

Association Members Research establishments and academia leading in the field of aviation and environment are members of ECATS IASBL. Association is open to new partners with proven expertise in the field of aviation and environment.

Conference Organisation

Conference Session Structure The event will be held in plenary sessions, to ensure the full exploitation of interdisciplinarity and synergies between involved disciplines and networking opportunities.

Conference Location The conference will be held in the historic Hotel Leonardo, in the heart of Berlin, walking distance from Alexanderplatz. The hotel offers excellent meeting facilities in the heart of this European Capital.

Hotel block reservation - until 10 August 2013

Networking Dinner The networking dinner will be held in the German Bundestag, which is a unique occasion to visit the former Reichstag. Reservation and confirmation beforehand is required, including valid passport data. Conference participants will be informed on formal requirements.

Registration fees Delegates 390 € (until 10 Aug: 340 €); Students plus ECATS Members: 290 € (free of tax). It covers access to conference, documentation, lunches and coffee breaks, icebreaker (Mon 18 Nov 2013), and networking dinner (Wed 20 Nov 2013).

Scientific Programme Committee

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- Dominique Collin, SNECMA, FR
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Or visit the programme on the web:
www.ecats-network.eu



1st ECATS Conference

Technical challenges for aviation in a changing environment

18-21 November 2013
**Leonardo Hotel, Alexanderplatz,
Berlin, Germany**

Deadlines extended

