The transport sector is under increasing 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 in achieving this sustainable position. There will be 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.

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. Contributions which emphasise the need to establish solid knowledge and well-evaluated measures and means, to provide quantitative estimates of aviation climate impact and mitigation concepts are particularly welcome. In addition, contributions which explore approach to help aviation are invited.

Propulsion systems have for a long time increased in size, relative to the aircraft, making aerodynamic and structural integration an increasing challenge. Additionally, a closer propulsion system integration may offer emissions reductions either through hybrid electric concepts or by ingesting the vehicle boundary layer. Moreover, the propulsion systems must be integrated under constantly more demanding noise constraints.

Increasing environmental and cost demands drive the development of new aircraft materials for a range of applications. As composite material capability, manufacture and design methods develop their use in airframe and propulsion systems increase. Advanced manufacturing methods such as additive manufacturing, powder metallurgy and on longer term the use of graphene in aircraft promise to provide future steps in aircraft efficiency.
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 Objectives are to build up expertise, exploit multi-disciplinary platform, 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 interdisciplinary networking and synergies between involved disciplines.

Conference Location The conference will be held in Chalmerska huset, in the heart of Gothenburg, walking distance from the central station.

Networking Dinner The conference dinner will be held in the Skansen Kronan, Gothenburg (included in registration fees).

Registration fees

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<th>Until 15/2/20</th>
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<tr>
<td>Delegates</td>
<td>350 €</td>
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<td>ECATS members</td>
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<td>Students</td>
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Call for abstracts

ECATS International Association organises the 3rd ECATS Conference on Making Aviation Environmentally Sustainable

Future Challenges for Aviation

21-23 April 2020

Gothenburg, Sweden

For updated information please contact:

Chair: Dr. Sigrun Matthes, DLR, DE
chair@ecats-network.eu

Or visit the conference on the web:

www.ecats-network.eu/events/3rd-ecats-conference

Details on SARC meeting: https://sarc.center