

## A Brief History of EUCASS

The European Conference for Aerospace Sciences (EUCASS) arose from a series of research collaborations among European scientific organizations beginning in the 1990s. In 1998 ONERA and DLR established a joint annual symposium, the ONERA-DLR Aerospace Symposium (ODAS). These two research organizations were already very much engaged in collaborations, notably on helicopters and hypersonics, and co-editing the journal *Aerospace Science and Technology*. ODAS became an elegant way of exposing and fostering the multidisciplinary character of the concerned R&D domains and attracting, thanks to its critical mass, the European and national authorities, the funding agencies and industry. The latter could then keep up with progress made at the service of taxpayers and for the benefit of major players like European Aerospace and Defense Systems (EADS), Eurocopter, Dassault, etc. The first ODAS was held in France in 1999. It was followed every year alternatively in Germany and France, with initial attendance of the order of 100 participants.



EUCASS Foundation, the signatories. Front J.-P. Taran (ONERA, former EUCASS President), W. Koschel (DLR, 1st EUCASS President). Second row P.-G. Amand, G. Degrez, M. Calabro (First Chairman of the Technical Committee), M. Riethmuller (VKI, and former EUCASS treasurer), M. Carbonaro (VKI Director and EUCASS Treasurer)

The ONERA-DLR Aerospace Symposium was subsequently expanded to include visitors from other countries. In 2001, following earlier contacts with the Russian Central AeroHydrodynamic Institute (TsAGI), especially through the International Science and Technology Center (ISTC), several TsAGI officials were invited at the third ODAS. The suggestion to launch similar bilateral annual workshops with TsAGI was endorsed and finalized there. The first of these took place a few months later in Moscow. In addition, during the International Conference on the Methods of Aerophysical Research (ICMAR) in July 2000, the European Hypersonics Association (EHA) was formed by representations from scientific research organizations from France, Germany, Russia and other countries.

The scientific leadership of these three associations (ONERA, DLR and TsAGI) recognized the benefits of merging their efforts to establish a biannual European-Russian aerospace conference comparable to the American Institute of Aeronautics and Astronautics annual Aerospace Sciences Meeting held in the United States. In late 2003, the project of a conference named EUCASS was proposed to the above organizations and was received with enthusiastic and unanimous support. The suggestion to hold the very first conference in Russia was also embraced. Vigorous encouragements came from the International Science and Technology Center (ISTC), European Space Agency (ESA), Centre National d'Etudes Spatiales (CNES) and European Aeronautic Defence and Space Company (EADS) who pledged financial support.



A. Merlen, former EUCASS President

The first EUCASS conference was held in Moscow, Russia, on July 4-7, 2005, organized by TsAGI, ONERA and the Russian Academy of Sciences (RAS). The conference was attended by 430 participants from Europe and Russia.

On 19 April 2006 EUCASS was incorporated as an international non-profit association under Belgian law (AISBL) with headquarters at the von Karman Institute for Fluid Dynamics in Brussels, Belgium. EUCASS is governed by the EUCASS Bureau responsible for conference planning and financial management. The membership of EUCASS is the General Assembly which meets annually to elect the members of the Bureau and approve the financial audit of the organization. Membership is open to all interested persons.

In subsequent years EUCASS conferences were held in Brussels (2007), Versailles (2009), St Petersburg (2011), Munich (2013), Krakow (2015), Milan (2017), Madrid (2019), Lille (2022) and Lausanne (2023). Attendance at each conference has increased to more than 700 participants, marking EUCASS as the second largest aerospace sciences conference in the world.

Faithful to its objective of bringing together the players in the community, and strengthened by their growing support, Eucass has not only overcome the trials of Covid and international tensions, but has also created strong links with the most relevant scientific associations in the sector, which contribute to the holding of specialized sessions at the conference.

Additionally, EUCASS has organized thematic workshops on selected topics of interest to the aerospace community. These include the "Fundamentals of Aerodynamic Flow and Combustion Control by Plasmas" at Villa Monastero, Varenna, Italy in May 2007 and at Les Houches, France in October 2009 and March-April 2011, and at Aussois, France in April 2013 and "Collisions of Fast Particles with Surfaces" at Aussois, France in September 2016. The workshops brought together scientists from a wide range of disciplines to discuss opportunities for collaborative research.

EUCASS continues to organize biannual conferences focusing both on traditional and emerging areas of aerospace research proposed by the community. EUCASS Technical Committees include Aerodynamics and Flight Physics for Aircraft and Launch Vehicles including Reentry Bodies (AEROFLIPHY); Airships, Balloons and Lighter-Than-Air Vehicles (AEROST), Computational Fluid Dynamics and Multiphysics Simulation in Aerospace (CFMPS), Climate Neutral Aviation Fuels and Alternative Propulsion Systems (CLINAV); Flight Dynamics/GNC and Avionics for Aeronautic and Space Applications (FDGNCAV); Advanced Aerospace Designs for Innovative Flow Control Technologies (FLOCON), Hybrid Electric Propulsion (HEPAEM), Human Factors in Aviation and Space (HUMANF), New Systems for Future Space Operations (NEWSPA), Propulsion Physics for Aeronautic and Space Applications (PROPHY), Reusable Systems for Space Access and In-Orbit Operations (REUSYS), Space Exploration - *In Situ* Resource Utilization (SPEXPLO), Structures and Materials for Aeronautic and Space Systems (STRMAT), Student Space Projects (STUDENT), Sustainable Aviation: Aircraft Design and Flight Operations (SusTAV), Sustainable Space: Logistics and Space Debris (SUSTSP), Systems Integration on Aircraft and Space Systems (SYSINT), Testing in Aerospace (TESTING), Turbomachinery for Aeronautical and Space Applications (TURBO), and UAVs: Future Applications, Services and Specific Technologies (UAVFUT).



EUCASS is focused on supporting students through conference participation and paper presentation. At each EUCASS conference since 2009, Best Student Paper awards has been conferred for each category, with one overall winner each time.

The overall winners of the Best Student Paper Award are:

- Versailles 2009: Dorian Colas, Ecole Centrale de Paris (France)
- Munich 2013: Julian Dazy Suarez, Imperial College (United Kingdom)
- Krakow 2015: Ahmad Alsahlani, University of Salford (United Kingdom)
- Milan 2017: Gabriele Perozzi, ONERA (France)
- Madrid 2019: Pedro Simplicio, University of Bristol (United Kingdom)
- Lille 2022: Christopher Glaser, ONERA - Université de Toulouse (France)
- Lausanne 2023: Ciro Salvi, DLR (Germany)



2013 Julian Dazy Suarez



2015 Ahmad Alsahlani



2017 Gabriele Perozzi



2019 Pedro Simplicio



2022 Christopher Glaser  
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2023 Ciro Salvi  
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In summary, the mission of EUCASS is:

1. Organize the biennial European Conference for AeroSpace Systems dedicated to all aerospace sciences and to organize frequent smaller seminars/meetings, targeted at state-of-the-art issues.
2. Foster cooperation, training and mobility by bringing together all the expertise available to initiate communication networks, particularly within the EU's framework programmes.
3. Act as a European showcase for aerospace sciences, providing a unique and high-level forum for all European aerospace research players to promote enabling sciences at an affordable cost. It is also the forum where scientists from non-European countries can gain a comprehensive picture of European accomplishments.
4. Assist decision makers in contacting professionals on the European continent and elsewhere, and in obtaining impartial technical evaluations of projects and programmes.
5. Develop partnerships with other aerospace associations in Europe and elsewhere, and with societies that foster disciplines of aerospace use (Physics, Mechanics, Applied Mathematics, etc.) in Europe.