Official Language

All papers must be submitted and presented in English, the official language of the conference.

Conference Venue

UNIVERSIDAD POLITECNICA DE MADRID

ETSIAE UPM School of Aeronautics and Space Engineering

Universidad Politécnica de Madrid
Plaza del Cardenal Cisneros, 3
28040 Madrid, SPAIN

Exhibition/ Sponsoring

EUCASS 2019 will offer space for exhibitions which provides an excellent opportunity to demonstrate expertise, products and services to a targeted group of researchers, scientists, engineers and senior managers. Customized Sponsorship packages will be available to allow for brand positioning throughout the event.

Conference Secretariat Coordinates

> Carte Blanche <

Phone + 33 - 5 63 72 30 68

7 chemin En Barbaro - 81710 Saïx - France

contact@eucass2019.eu

Technical Committee

Feel free to apply and become a committee member

Chairs: M. Calabro (max.calabro@innerarch.eu),
Ch. Bonnal (christophe.bonnal@cnes.fr)

Local Organizing Committee

Chairman:
R. Martínez-Val (ETSIAE-UPM, rodrigo.martinezval@upm.es)

Vice chairman:
M. Rodríguez (ETSIAE-UPM, manuel.rodriguez@upm.es)

Members:
A. Güemes (ETSIAE-UPM); C. Cuerno (ETSIAE-UPM); E. Ahedo (Universidad Carlos III de Madrid); G. Alonso (ETSIAE-UPM); E. Valero (ETSIAE-UPM); J. Gómez Elvira (INTA); M. Morell (Airbus Defence and Space); L. Rodríguez Gil (Sociedad Aeronáutica Española); J. Garrido González (Sociedad Aeronáutica Española)

Secretary:
A. Sánchez (ETSIAE-UPM, alejandro.sanchezc@upm.es)

Conference Deadlines

October 25, 2018	Website Open for Abstract Submission
February 11, 2019	Abstract Submission Deadline
March 2019	Notification of Acceptance
	Rejection of Papers
	Registration site open
April 2019	Increase in registration fee
June 19, 2019	Final Manuscript Deadline

eucass 2019

8th European Conference for Aeronautics and Space Sciences

Hosting the Conference on
"Reusable Systems for Space Access",
by CNES, DLR and ONERA
and a Workshop on **"In-Situ Resource Utilization"**

1 - 4 July 2019 **Madrid, SPAIN**

CALL FOR PAPERS

esa

cnes CENTRE NATIONAL D'ETUDES SPATIALES

ONERA THE FRENCH AEROSPACE LAB

DLR

E-CAero European Collaborative Dissemination of Aeronautical research and applications
An FP7-AERONAUTICS and AIR TRANSPORT (AAT). Coordination and Support Action (CSA)

eucass 2019

Objectives

This is the eighth EUCASS conference after Moscow (2005), Brussels (2007), Versailles (2009), Saint Petersburg (2011), Munich (2013), Krakow (2015) and Milano (2017).

The conference is organized by the EUCASS association, founded by a group of European scientists and engineers in order to provide, on the European continent, a high quality forum for the world aerospace scientific community. It is operated by the best specialists in EU, Russia and NIS. It attracts all players, research scientists, engineers, managers and decision makers, world over. It positions itself at the service of agencies and industry and strives to reduce the time to market of discoveries in academic laboratories. Its goal is to foster the competitiveness of its end users, industry and agencies alike.

- Review the state of the art in Aeronautics and Space Sciences, focusing on promising innovations.
- Bring recent scientific breakthroughs to the attention of industry.
- Develop synergies between Aeronautics and Space, academia and industry.
- Give agencies and industry the opportunity to present their programs.
- Open the conference agenda to new end-use topics in addition to the traditional enabling sciences.
- Invite participants to take advantage of the comprehensive coverage offered by the program for the conception of future multidisciplinary projects.
- Offer PhD students to mix with senior researcher and engineers through very affordable registration fees.

All presented papers will receive a DOI and be downloadable free of charge from the EUCASS wesite (full open access).

The conference focusses on advances in aeronautics and space sciences. It will feature seven parallel symposia:

- System Integration
- Flight Physics
- Flight Dynamics, GNC & Avionics
- Structures and Materials
- Propulsion Physics
- Conference on “Reusable Systems for Space Access”, by CNES, DLR and ONERA
- Workshop on “In-Situ Resource Utilization”

You are invited to submit a 500-word abstract from 25 October till 11 February 2019.

Authors of accepted abstracts will be invited to prepare a full 10-15 page paper and submit it before the deadline of 19 June, 2019.

Papers effectively presented and submitted in due time will be published in the conference proceedings with full open access and with their DOI numbers.

All papers must be submitted and presented in English, the official language of the conference.

Technical topics

SYSTEM INTEGRATION

System Integration: Ch. Bonnal (CNES), L. Anselmo (CNR, Pisa), J. Gigou (ESA), M. Sippel (DLR), P. Tatry (Airbus), V. Aslanov (Samara U.

This symposium is concerned with multidisciplinary and integration problems (subjects where separate disciplines interact in synergy). Typical domains of interest are: MDO, fluid-structure-GNC-thermal interaction, mission/ trajectories, advanced or new concepts, actuators, vehicle comfort, FDIR approaches, embedded systems/ trends on Information technologies, architecture design with COTS hardware, augmented reality, energy harvesting, system aspects of space debris, special sessions on ongoing research program.

FLIGHT PHYSICS

D. Knight (Rutgers), Ph. Reijasse (Onera), E. Bondar (ITAM), I. Lipatov (TsAGI), A. Viviani (Campania U.)

The Flight Physics Symposium addresses all aspects of aerodynamics relevant to aircrafts and UAVs, missiles and projectiles, launchers, and re-entry vehicles. Topics will deal both with external and internal flows since aerodynamics or aero-acoustics are the main concern of the symposium. Papers will address at least one of the following three approaches: physical understanding, theoretical analysis, and/ or the development of control technologies & control methodologies applied to aeronautical or aerospace flows. Non-intrusive metrology and code validation are an essential ingredient.

STRUCTURES AND MATERIALS

M. Berdoyes (ArianeGroup), B. Lenczowski (Airbus), K. Mathis (CNES)

The structures and materials symposium covers breakthrough improvements to aerospace structures and engines from innovative materials, processing technologies, structural design and analysis. Massive introduction of fiber-reinforced organic composites has come of age and the introduction of other composites is progressing in the engines. New processes like additive manufacturing must also be treated.

FLIGHT DYNAMICS/GNC and AVIONICS

Ch. Vallet (ex EADS Astrium), M. Ganet (ArianeGroup), Ch. Philippe (ESA), A. Nebylov (Saint Petersburg U. AI), D. Choukroun (U. Ben Gurion), B. Rmili (CNES)

This symposium will cover the applications of novel analytical and experimental methods for the analysis and the prediction of the flight dynamics and GNC of civil and military airplanes, helicopters, drones, launch vehicles and spacecraft as well as on-board electronics and avionics.

PROPULSION PHYSICS

L. Galfetti (Politecnico di Milano), S. Frolov (RAS), N. Girard (CNES), S. Schlechtriem (DLR)

The Propulsion Physics Symposium will cover all aspects of air-breathing and space propulsion, spanning from new developments in engines and propellants to modeling and testing. Topics range from basic research and development to applied studies, using experimental, theoretical and/ or advanced numerical methods, with special focus on fundamental physical understanding, metrology and code validation.

CONFERENCE ON REUSABLE SYSTEMS FOR SPACE ACCESS

E. Louaas (CNES), I. Dietlein (DLR), G. Ordonneau (Onera)

This symposium is for all stakeholders involved in the research and development of reusable launch systems. It will review the status of the different activities and projects, and cover all the technical topics associated with reusability, including technology demonstrators, system studies and new missions enabled by reusability. It will also address reusability strategies, synergies with aeronautics, development roadmaps, commercial aspects, Space access policy.

WORKSHOP ON IN-SITU RESOURCE UTILIZATION (ISRU)

R. González-Cinca (UPC-BarcelonaTech), J. Carpenter (ESA)

This workshop will cover all aspects of energy and power; materials, construction and architecture; oxygen and water from regolith and polar volatiles; regolith excavation and processing; resource prospecting needs and approaches; production of consumables and propellants; environmental challenges; crossovers with terrestrial resources; missions, supporting technologies and commercial activities.

MINI SYMPOSIA/WORKSHOPS

Would you suggest or organize a mini symposium or a workshop dedicated to a special topic? For instance on Clean Air, Space debris, Combustion instability, UAV, Supersonic civil aircraft, Additive manufacturing, Green fuels Icing, Boundary layer transition, Flow control, Aeroacoustics, Experimental methods? Please contact the concerned Symposium Chair.