

CALL FOR PAPERS

9TH EDITION OF THE
SPACE PROPULSION
CONFERENCE

20
SPACE
PROPULSION
24

20-23 MAY 2024
GLASGOW • SCOTLAND
WWW.3AF-SPACEPROPULSION.COM

ABSTRACT DEADLINE
06 NOVEMBER 2023



Association Aéronautique
et Astronautique de France



Following eight editions of growing success, 3AF - Association Aéronautique et Astronautique de France, and Agencies, ESA, CNES and UK SPACE AGENCY are pleased to announce:

SPACE PROPULSION 2024

The ninth of a series of international conferences on technical and programmatic aspects related to the development and application of Space Propulsion technologies.

During this edition, plenary roundtables will bring a specific focus on **How to speed up innovative propulsion release to market?**

The SPACE PROPULSION Conference is the international forum supporting the preparation of future activities and roadmaps in all the fields of space propulsion. As with the previous edition, EUCASS joins 3AF to organize a prospective session: «**Innovative Propulsion for sustainable access to Space and in-Space transportation**».

The programme of the event highlights programmatic and technical issues and promotes exchange of views and information in the two main areas of propulsion for spacecraft and for space transportation.

More than 700 professionals from over 30 countries are expected at the event, including engineers and scientists from government, university and industry.

This event is a unique opportunity to discover innovative solutions and implement fruitful exchanges between colleagues of different countries and disciplines.

SPACE PROPULSION 2024 WILL BE ORGANIZED AROUND

- **An opening day dedicated to plenary sessions and round tables** during which agencies' general directors, industry, integrators and equipment manufacturers will be invited to speak;
- **Up to 4 days dedicated to technical presentations and plenary sessions;**
- **A hall reserved to sponsors and exhibitors** to showcase their innovation, research, technology and latest technical results. For optimum visibility during the event, this exhibition space is situated at the heart of the conference centre;
- As with the last edition, **a start-up contest** will be conducted to shed light on innovative technologies and breakthrough projects.

WELCOME TO THE SPACE PROPULSION 2024 CONFERENCE !

Jamila MANSOURI & Dominique RIBEREAU

Conference Chairs

WWW.3AF-SPACEPROPULSION.COM

FLASHBACK ON THE LAST EDITION

In 2022, the SPACE PROPULSION Conference was organised in Estoril, Portugal.

In 2022, The SPACE PROPULSION CONFERENCE gathered more than 560 participants from 32 different countries and nearly 180 different entities, 57 exhibitors, for 87 technical sessions and about 300 presentations.

This achievement was possible thanks to the participation of a large number of top-ranking delegates from the international sector (Head of Agencies, Space Operators, Industry CEOs), European and International Agencies and Industry support and to a great number of high-quality papers presented throughout the event.

SPACECRAFT PROPULSION

For the area of application to spacecraft, Space Propulsion 2024 is soliciting abstracts on the following subjects:

- Chemical spacecraft propulsion systems
- Electrical spacecraft propulsion systems
- Advanced spacecraft propulsion systems
- Propulsion components
- Integrated & miniaturised modules or sub assemblies
- Production, manufacturing, material & processes
- Development and qualification programs
- Overview of current programmes (requirements, roadmaps, solutions)
- AIV issues and tools (facilities diagnostics, methodologies)
- Flight testing and experience (operations, lessons learned, feedback from in flight failure and anomalies, satellite passivation and deorbiting strategies)
- Technology building blocks for future spacecraft propulsion systems including exploration
- Green Propulsion & New Propellants for spacecraft (ongoing programmes and applications, R&D)
- Rocket propulsion & global environment (REACH, impact of new regulations)
- Cost-related aspects of spacecraft propulsion
- Flow and Systems Modelling (all propulsion systems design and performance evaluation)
- EP Thruster Plasma Modelling (inside thruster and interaction with s/c)
- Theoretical performance vs status of technology: how to push the limits (materials, design solutions, efficiency/specific weight, energy generation cycles, etc)
- Game changers (constellations, small sats, private initiatives, additive manufacturing use...)
- Reusability
- LEAN principles applied in Space Propulsion (low volume)
- Synergies between spacecraft and launcher propulsion developments

SPACECRAFT PROPULSION TECHNICAL COMMITTEE MEMBERS

ALFANO	Simone	CNES	FERNANDEZ	Victor	ESA	PACKAN	Denis	ONERA
ANTHOINE	Jérôme	ONERA	FORD	Mark	ESA	PEUKERT	Markus	OHB System AG
BANGALORE	Prashanth	Agile Space Industries	FORMARO	Roberto	ASI	POLK	James E.	Jet Propulsion Laboratory
BRAYFORD	Joshua	UKSA	GARBAYO	Alberto	AVS UK	POPOV	Garri	RIAME
CASSADY	Joe	AEROJET	GONZALEZ DEL AMO	Jose	ESA	SACCOCCIA	Giorgio	ESA
COATES	Matt	LMO	GOODBURN	Stephen	Airbus	SCHMIDT	George	NASA
COLETTI	Michele	TAS-UK	KREJCI	David	ENPULSION	SHIIKI	Shohei	IHI Aerospace
COXHILL	Ian	Nammo	MANFLETTI	Chiara	NEURASPACE	STEELANT	Johan	ESA
DEMAIRÉ	Alain	OHB Sweden AB	MANSOURI	Jamila	ESA	VAUDOLON	Julien	Exotrail
DINGERTZ	Wilhelm	ECAPS	MURRAY	Jordan	Benchmark Space Systems	ZUCKERMAN	Zvika	Rafael
DUCHEMIN	Olivier	Safran Spacecraft Propulsion	NAGATA	Taiichi	JAXA			

PROPULSION FOR SPACE TRANSPORTATION

For the area of application to space transportation systems, Space Propulsion 2024 is soliciting abstracts on the following subjects (some topics include a non-exhaustive list of more detailed themes as guidance for abstract submission):

- Propulsion sub-systems and components (turbo machinery, thrust chambers, nozzles, LH2 fluid bearings, open impeller integration in turbo pumps, etc)
- Production and manufacturing issues (large boosters, components, etc)
- Liquid, Solid, Hybrid, Gel and Air-breathing Propulsion Systems for Launcher and Upper Stages (full expander cycle vs expander bleed cycle: advantages and limits, rocket engine reliability estimation, composite casing experience and future evolutions, idle mode or high throttling mode of rocket engines)
- Overview of current programmes (requirements, roadmaps, solutions)
- AIV issues and tools (facilities diagnostics, methodologies, telemetry and other advance measurement techniques)
- Flight testing and experience (operations, lessons learned, feedback from in flight failure and anomalies, satellite passivation and deorbiting strategies)
- Green Propulsion & New Propellants for Space Transportation (ongoing programmes and applications, R&D)
- Technology building blocks for Future Space Transportation Propulsion Systems: Launchers, Exploration platforms & Space Tourism (cryogenic long term storage in space, fluid transfer, etc)
- Rocket propulsion & global environment (REACH, impact of new regulations, dismantling of unused SRMs)
- Low Cost Access to Space, including operation aspects
- Modelling (CFD & validation of cryogenic, liquid, solid, hybrid; application to rocket engines, fluid management in micro gravity, combustion instabilities, etc)
- Pressure-Thrust oscillations issues (in-flight measurements, multi-physics coupling modelling, etc)
- Impact of new requirements and regulations on design (debris mitigation, REACH, ...)
- Health monitoring

SPECIAL TOPIC WITH EUCASS : INNOVATIVE PROPULSION FOR SUSTAINABLE ACCESS TO SPACE AND IN-SPACE TRANSPORTATION

Sustainable space transportation is one of our new challenge. How new propulsion systems (propellants, engine, stage, tank design, fluid operation, ...) can contribute to decrease environmental impact of space transportation.

PROPULSION FOR SPACE TRANSPORTATION TECHNICAL COMMITTEE MEMBERS

BETTI	Francesco	AVIO	KAWASHIMA	Hideto	JAXA	RIBEREAU	Dominique	ArianeGroup
BIANCHI	Sébastien	Air Liquide	KUMADA	Nobuhiko	MHI	SCHLECHTRIEM	Stefan	DLR
BOIRON	Adrien	Nammo	MOSSOLOV	Serguei	Keldysh Centre	SCHNEIDER	Dirk	ESA
BOURY	Didier	ArianeGroup	NARAYANAN	V.	LPSC/ISRO	SUDAKOV	Vladimir	NPO Energomash
BRETEAU	Jérôme	ESA	ONOFRI (Pr)	Marcello	University of Rome (Sapienza)	TALAMONI	Yann	ArianeGroup
CIEZKI	Helmut	DLR	ORDONNEAU	Gérard	ONERA	VALÈS	Marc	Dassault Aviation
D'AVERSA	Emanuela	ASI	ORTEGA	Guillermo	ESA	VELANDER	Martin	GKN Aerospace
FUESER	André	ArianeGroup	PALMNÄS	Ulf	Palmnäs & co	VIGIER	Gilles	3AF
GIRARD	Nathalie	CNES	PESSANA	Mario	TAS	ZHENG	Riheng	Chinese Society Astronautics (CSA)
GORDON	Emilio	SwRI	PREVOST	Lilian	CNES			
HENOUX	Jean-Christophe	ArianeGroup						

CONFERENCE SCHEDULE

Call for Papers Opening	05 July 2023	Online registration opening	05 February 2024
Deadline for Abstracts	06 November 2023	Deadline for papers and/or Confirmation of Participation	01 April 2024
Notification of acceptance to authors	15 January 2024	SPACE PROPULSION 2024	20-23 MAY 2024
Preliminary programme	05 February 2024		

CALL FOR PAPERS

ADVICE TO AUTHORS

- The main purpose of the abstract is to give the Technical Committee information to assist them in selecting the papers to be presented at the conference.
- The selected papers will be presented in a 20 minutes speech at the conference.
- 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 500 words.
- The abstract should summarize the main objectives of the paper to be presented and outline its conclusions.
- Work that has been presented elsewhere, and not updated, will be considered inappropriate.
- All abstracts should be submitted on www.3af-spacepropulsion.com, before 06 Nov 2023.

NOTIFICATION OF ACCEPTANCE/REFUSAL

The organizing committee will notify all authors of its decision by 15 January 2024. This notification will be accompanied by detailed instructions allowing authors to prepare and send their paper to the 3AF secretariat by 01 April 2024.

Please note that failure to comply with the deadlines will entail your presentation to be removed from the official program.

DIGITAL OBJECT IDENTIFIER – DOI

Once the final paper is confirmed, registered authors will have the opportunity to get a DOI reference for their publications on SP2024.

LANGUAGE

Please note that the official language for the conference will be English. All presentations and documents must be in English.

CONFERENCE VENUE

Space Propulsion 2024 will be held at the **Scottish Event Campus – SEC**
Exhibition Way, Glasgow G3 8YW - Scotland, United Kingdom
<https://www.sec.co.uk/>

Plan your journey here: <https://www.spt.co.uk/>



ACCESS

Glasgow International Airport (GLA) is situated 15km from the City Center.
20 minutes by taxi to city center. Bus Shuttle service every 10 minutes.

For more information on air traffic, please visit <https://www.glasgowairport.com/>

Flight from:

• Paris :	1h50	Lisbon:	3h15
• Amsterdam:	1h35	Rome:	3h25
• Berlin:	2h20	London:	1h20 (5h by train)

You must have a passport (not only a national identity card) to enter the United Kingdom, it should be valid for the whole of your stay.

EVENT LOCATION & ACCOMMODATION

SEC is a world-class conference venue, hosting events, spanning from massive 7,000-delegate congresses, to more niche meetings.

Many advantages:

- Modern and fully equipped
- 20 minutes from Airport
- On-site train station
(3-minute journey to city centre)
- 8 onsite hotels (1,500 beds)
within 5min walk from venue (3* & 4*)
- 7,800 beds within 2km of Campus
- Social programme venues

Learn more about Glasgow here: <https://peoplemakeglasgow.com/>

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STEERING COMMITTEE

Jamila **Mansouri** (ESA, The Netherlands)
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CONFERENCE SECRETARIAT

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EXHIBITION

If you are interested in receiving the exhibition opportunities details, please contact :
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