

## Abstract Submission

Authors are invited to submit their abstracts according to the procedure described below. Each Abstract (approximately 500 words) should clearly outline major achievements and innovative ideas.

Papers will be selected on the basis of:

- interest in the subject by the target audience
- relevance to the conference topics
- originality of the ideas presented
- quality and clarity of the content

Papers must be submitted in English, according to the "instructions to authors". English will also be the working language at the conference.

**Abstracts must be submitted by 15 November 2020.**

A "No Paper – No Podium & No Podium – No Paper" rule applies.

Proceedings from the previous conferences are available via <https://conference.sdo.esoc.esa.int/>

## Target Audience

The conference will provide a unique forum for information exchange, technical discussions and networking between space debris researchers, engineers & decision takers of industry, policy makers & space lawyers, insurance underwriters, space & ground system operators, institutional organizations (e.g. space agencies, EU, UNCOPUOS, IAA, COSPAR), academia, and the defense sector.

## Important Dates

1 Oct 2020	Abstract submission starts
1 Nov 2020	Registration opens
15 Nov 2020	Deadline for abstracts
15 Jan 2021	Notification of authors
1 Mar 2021	Final program
10 Apr 2021	Deadline for full papers
<b>20 - 23 Apr 2021</b>	<b>8th European Conference on Space Debris</b>
July 2021	Publication of proceedings

## Conference Venue

The conference will be organised in a **virtual format**. On-site participation at the European Space Operations Centre ESA/ESOC, Robert-Bosch-Strasse 5, 64293 Darmstadt, Germany, may still be possible and will be confirmed by 1 March 2021 at the latest.

## Registration Fees

Registration fees for both, the virtual conference and for a on-site participation, will be published at the conference website during October 2020.

## Point of Contact

Conference Website

<https://space-debris-conference.sdo.esoc.esa.int/>

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# 8<sup>th</sup> European Conference on Space Debris

**Virtual conference  
20 – 23 April 2021**



## Debris Background

Since 1957, nearly 6,000 space launches have led to an on-orbit population today of about 26,000 trackable objects. Large constellations are being deployed. Today, a total of about 3000 objects are functional spacecraft. The remaining are space debris, i.e. objects which no longer serve any useful purpose. Most of the routinely tracked objects are fragments from about 550 break-ups, explosions, collisions, or anomalous events resulting in fragmentation of satellites or rocket bodies. In addition, there is evidence of a much larger population of debris that cannot be tracked operationally. An estimated number of 900,000 objects larger than 1 cm and 128 million objects larger than 1mm are expected to reside in Earth orbits. Due to relative orbital velocity of up 56,000 km/h, centimetre-sized debris can seriously damage or disable an operational spacecraft, and collisions with object larger than 10 cm will lead to catastrophic breakups, releasing hazardous debris clouds of which some fragments can cause further catastrophic collisions that may lead to an unstable debris environment in some orbit regions ("Kessler syndrome").

Space debris mitigation measures, if properly implemented by spacecraft designers and missions operators, can curtail the growth rate of the space debris population. Active removal of large intact objects has been shown to be necessary to reverse the debris increase. In addition, it becomes important for each and every mission, whether a large constellation or a single 1U CubeSat, to quantify the impact it has on the space environment and other operators in order to achieve a sustainable space environment.

Facing the challenges set by a rapidly growing population of space objects requires a better understanding of the space debris environment as well as strategies to handle the related risks. A sustained use of space as a scarce resource needs the collaboration of a multitude of technical disciplines. The active exchange among recognized experts is the aim of the conference..

## Conference Scope

Focussing at scientific exchange the European Conference on Space Debris is the largest dedicated gathering on the subject. Since 1993 internationally renowned scientists, engineers, operators, industry experts, lawyers and policy makers meet here every four years and discuss different aspects of space debris research, including measurement techniques, environment modelling theories, risk analysis techniques, protection designs, mitigation & remediation concepts, and standardisation, policy, regulation & legal issues.

During four days the **Eighth European Conference on Space Debris** will provide a forum to define future directions of research based on latest findings and results. Panels and special sessions will be devoted to space safety topics, e.g. environment impact, mitigation and regulation technology and tools, novel services and servicing, as well as concepts for operations in a congested environment.

The conference program will highlight all classical disciplines of space debris research:

- radar, (active) optical and in-situ measurements
- debris environment modelling and prediction
- orbit prediction, determination, and cataloguing
- operational collision avoidance and services
- space situational awareness systems & applications
- debris aspects of large constellations
- on-orbit and re-entry risk assessments
- debris mitigation techniques and processes
- active removal, servicing, remediation concepts
- environmental impact assessments
- regulatory aspects, standardisation, policies
- hypervelocity impacts, protection and shielding

