

Space systems are increasingly recognized as critical infrastructures. The International Academy of Astronautics (IAA) established in 2006 a Study Group on this topic. Since 2012, the IAA, together with the Romanian Space Agency (ROSA) organizes yearly a series of conferences on Space Systems as Critical Infrastructures. A cosmic study that aimed to elaborate an assessment of the degree of criticality of space systems as essential infrastructures for the earth civilization was published by IAA in 2019.

With space infrastructures becoming critical worldwide, e.g. in both the EU and the USA, alongside the emphasis placed on coordination of space traffic and the development of standards related to the management of space-related activities, the topic proposed this year comes to highlight, clarify and build upon the current state of affairs. The development of mega-constellations, in parallel with the creation of micro-launchers, generates new infrastructures but also new threats for the existing space infrastructures.

The UN COPUOS Guidelines for the Long-term Sustainability of Outer Space Activities have an important role in the context of space traffic management. Infrastructures that used to be considered stable proved their vulnerability in possible collisions with defunct objects in orbit, thus requiring for more and better coordination in terms of monitoring debris and collision avoidance maneuvers.

This year's Conference on Space Systems as Critical Infrastructure attempts to address i) the new space configurations, critical cases and global regulations (e.g. liabilities, ownership of space infrastructures) ii) space traffic management and iii) the legal issues and regulations regarding national, regional and global space systems, with an accent on Romania, European Union and the United States of America.

Call for Papers

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10th IAA Conference on Space Systems as Critical Infrastructure August 5-6, 2021 (hybrid mode) Danube Delta, Romania



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New systems, new actors, new threats



Romanian Space Agency

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International Academy of Astronautics

CALL FOR PAPERS

Romanian Space Agency and the International Academy of Astronautics invites papers for the 10^h conference on Space Systems as Critical Infrastructure, which will take place in Danube Delta, Romania, August 5-6, 2021, in a hybrid format.

Abstracts should be in English and should include the symposium topic addressed, the problem explored, the methodology used, results and conclusions. A one-page, single-spaced abstract of no less than 300 and no more than 500 words, must be received by **July 12, 2021** at conference@iaamail.org. The conference will be held in English.

OBJECTIVES

Space systems have become key enablers for a wide variety of commercial, scientific and military applications. The rapid growth of their capabilities has offset some of the size of the required investment and new developments promise an even greater reduction in the cost of space infrastructure. As such, some of the extant space systems have become deeply embedded in the functioning of advanced societies, supporting economies, lifestyles and governance processes. The increasing dependence on certain space systems places them firmly in the area of critical infrastructure, whose disruption or destruction would generate lasting damage. This inclusion into critical infrastructure theory is even more warranted as space systems have become a technological backbone for existing recognized critical infrastructures, such as energy, transportation, administration and others. The reliance of infrastructure systems-of-systems on space based command, coordination and control

capabilities during normal functioning, but especially during emergency and crisis situation management processes, means that space systems fulfil the requirements for critical status.

Areas of interest include, but are not limited to

- dependency of critical infrastructure sectors on space systems: Water, Food, Agriculture, ICT, Transport, Financial, Health, Energy, Nuclear Industry, Chemical Industry;
- external threats of space critical infrastructure: space weather, atmosphere, natural cosmic debris, artificial space debris, natural terrestrial debris;
- local threats of space critical infrastructure on: electronic interference, laser attack on satellite sensors destruction, electromagnetic pulse from a nuclear explosion, cyber attacks;
- legal issues and regulations regarding national, regional and global space systems.

SCHEDULE

June 29, 2021	Call for Papers
July 12, 2021	Abstracts Due
July 19, 2021	Final Announcement
July 28, 2021	Final paper due
August 5-6, 2021	Conference
November 2021	Proceedings

TRAVEL & TRANSPORTATION

Transportation service will be provided from Henri Coanda International Airport to the venue and back (230 km, aprox. 3h by car) on a schedule that will be available for the registered participants. Participants are advised to indicate their flight details when registering.

ACCOMODATION INFORMATION

Venue: Puflene Resort

Strada Portului Nr.98, Localitatea Murighiol, Delta Dunarii, Tulcea – 827150, Romania

GPS coordinates:

Latitude: 45.038763, Longitude:29.180288

Reservations: +40755141637

E-mail: info@pufleneresort.ro

<https://www.pufleneresort.ro>

A limited number of rooms have been pre-booked, participants wishing to benefit from the block booking rates are invited to contact the hotel before **July 21st, 2021**, specifying the name of the event.



REGISTRATION

To partially offset the cost of the Symposium there is a registration fee of €80 that covers admission to the sessions, a copy of the proceedings published after the symposium, coffee breaks and lunch.

Please **confirm your participation** at events@rosa.ro

Registration deadline: July 26, 2021

CONTACT

For any inquiries, any individual request or further information regarding transportation or accommodation details, please contact Ms. Ulpia Botezatu at ulpia.botezatu@rosa.ro, tel: +4(0)748956958.