



HELLENIC REPUBLIC

**National and Kapodistrian
University of Athens**

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SCHOOL OF LAW

Department of International Studies



Athens PIL
Athens Public International Law Center

2025 International Young Scholars Conference on Space Law

**New Tech, New Frontiers: Redefining Space Law in the
Age of Technological Breakthroughs**

5 September 2025

Venue: Athens, Greece

National and Kapodistrian University of Athens

Call for papers

Year after year, the space domain witnesses novel technological breakthroughs that push the limits of human exploration even further. Reusable rockets that reduce the cost of space travel, advanced space telescopes and sensors, space mining technologies and satellite mega-constellations (such as Starlink and IRIS²) that improve global internet coverage and earth observation services, in-space manufacturing, space-based solar power, autonomous robotic servicing missions, biotechnological enhancements for human spaceflight, are only some examples of the cutting-edge technologies that have been entertaining discussions about space activities in recent years. Yet as we speak, groundbreaking technology continues to emerge and, with it, new potential for space exploration and exploitation. Recent technological advancements include Artificial Intelligence (AI) and especially machine learning, robotics, quantum communication systems, 3D-printing and nuclear-powered propulsion, Augmented Reality (AR) and Virtual Reality (VR), biotechnology, blockchain, the Internet of Things and secure connectivity infrastructures. These technologies are radically changing the daily lives of millions of people, leaving an indelible mark on their morals and social habits, while at the same time profoundly affecting international relations and the balance of power within the international community.

Of course, all these innovative developments are not only in the field of space activities, nor are they exclusively space oriented. Technological leaps are perhaps the most intense feature of our time, and, to a large extent, represent the evolution of the digital revolution of the 1970s - 2000s. It is only to be expected, therefore, that the space sector will benefit from and be directly affected by these rapid technological developments.

Artificial Intelligence (AI) is at the heart of this technological revolution. AI is used for autonomous space navigation, mission planning and analyzing data from space missions, telescopes and rovers. In addition, AI is increasingly used to process data collected from earth observation satellites, for instance in the context of maritime domain awareness operations. Along with AI, a set of emerging technologies such as 3D printing in space, space habitat technologies and quantum communications seem able to revolutionize traditional space travel missions and to enable the human habitation of celestial bodies, such as the Moon and Mars, in the near future.

In this light, the 2025 edition of the International Young Scholars Conference on Space Law focuses on new and emerging technologies and their interplay with the existing legal framework governing outer space. The Conference aims to discuss the role of the *lex lata* in relation to new technologies that have already transformed the landscape of space exploration and continue to do so. Through the lens of these new technologies, fundamental principles of the 1967 Outer Space Treaty, such as international cooperation, information sharing, the prohibition of appropriation of outer space or State responsibility and liability may need to be redefined. In addition, the Conference purports to explore issues of liability and international responsibility related to the use of such new technologies.

In this context, this Young Scholars Conference invites **students** - from undergraduate to postgraduate/ doctoral level- to explore how international space law responds- or fails to respond- to these technological shifts. Contributions may address legal questions *de lege lata*, through the interpretation of existing treaty and customary norms, and/or *de lege ferenda*, by proposing new regulatory frameworks to meet the evolving challenges posed by emerging space activities.

Submitted papers are expected to explore relevant directions such as, indicatively:

- Artificial Intelligence (AI) in Satellite Operations and the Attribution of International Responsibility and Liability,
- Quantum Communications and the Evolution of Legal Frameworks for Data Security in Outer Space,
- Mega-Constellations and the Legal Challenges of Spectrum Allocation and Orbital Congestion,
- Legal Challenges of 3D Printing and In-Space Manufacturing,

- The Use of Nuclear Propulsion Systems and the Regulation of Environmental Risk in Space Missions,
- Legal and Policy Challenges of Autonomous On-Orbit Servicing and Autonomous Robotic Systems in the context of Space Exploration and Space Exploitation,
- Space- Based Solar Power (SBSP) and Cross- Border Energy Transmission,
- Human Enhancement Technologies and the Application of Bioethics and Human Rights Law Beyond Earth,
- In- Situ Resource Utilization (ISRU) and the Principle of Non- Appropriation under the Outer Space Treaty,
- Cybersecurity Risks in Satellite Systems: Rethinking Legal and Regulatory Protections in Outer Space,
- Legal Challenges of Maritime Domain Awareness through the Use of Space- Based Systems for Earth Observation and Artificial Intelligence.

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Prospective speakers may submit an abstract of the proposed paper **not exceeding 250 words** by e-mail to: yscsl2025.athens@gmail.com, by **16th June 2025, 23:59 EEST**. The abstract must indicate **(i)** the title of the paper, **(ii)** the full name of the author(s) and the name of the corresponding author in case of more than one authors, **(iii)** full contact details of the author(s) including valid email address, **(iv)** student status of the author(s) (undergraduate – postgraduate – doctoral candidate) and **(v)** institutional affiliation.

The language of the Conference will be English.

Each submitted abstract will be evaluated on the basis of its technical quality, innovative ideas (that meet the above-mentioned objective of the Conference) and relevance to the theme of the Conference. There is no registration fee. Best papers will be published in relevant proceedings. Papers should be **around 5000 words**, excluding footnotes. Guidance to authors will be sent after the selection process.

Deadlines

16 th June 2025	Deadline for abstract submission
5 th July 2025	Notification to authors/speakers
20 th August 2025	Deadline for paper submission (<i>No paper – no podium</i>)
5 th September 2025	Young Scholars Conference

Athens, 12 May 2025

The scientific coordinators

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