

PRACTITIONER SEMINARS**USE OF AI IN OUTER SPACE
POLICY AND LEGAL CONSIDERATIONS****ON-LINE
TUESDAY 6 JUNE 2023****SEMINAR DESCRIPTION**

Use of Artificial Intelligence (AI), related elements of Machine Learning (ML) and Deep Learning (DL) in civil and military space activities are increasingly investigated. Some forms are already employed. AI has potential to benefit the operation of large satellite constellations, robotic space exploration, satellite data analysis for Earth observation and astronomy and many more space activities.

This raises the important question of legal and political responsibility of involved actors at international, national and individual level. This Seminar aims to advance clarity regarding such responsibility among actors.

The Seminar provides an overview and general understanding of the use of AI and its related elements in space. The issue of state, company and individual responsibility in the various current and potential civil and military use cases will be considered from a legal and policy perspective. Factors affecting liability will also be considered. Questions and discussion of topics are encouraged throughout the Seminar.

LEARNING TARGETS

- Acquiring knowledge of the history, terminology and interpretations of the use of AI in space, as well as related technological status quo and trends; and
- Achieving an understanding of the current responsibilities in civil and military use of AI in space from legal and policy perspective, as well as broad awareness of related trends.

WHO SHOULD ATTEND

This Practitioner Seminar is particularly appropriate for those who wish to gain or increase their knowledge of AI and space:

- Decision-makers and researchers in government and international institutions
- Space agency personnel
- Military personnel
- Lawyers and jurists
- Commercial and consulting firm members
- Investors, insurers, bankers and executives requiring an understanding of AI and space in evaluating related risk and liability
- Managers and team leaders involved in the AI and the space fields
- Academics working on the use of AI in space
- Others engaged or interested in the use of AI and space

QUALIFICATION AND MATERIAL

- Prior knowledge of Space Policy and Law is not necessary. There is also no required reading before the Seminar, but a reading list will be sent to participants to support self-study.
- Slides presented by the lecturers will be provided following the Seminar.
- Any follow-up questions within a week following the Seminar will be answered via email.

CONTINUING PROFESSIONAL EDUCATION (CPD)

- This Seminar qualifies for CPD for Solicitors and for Barristers in England and Wales.
- Other professionals: please contact your respective professional bodies about whether this Seminar will qualify for CPD.

HOW TO APPLY

- Registration is on a first-come, first-served basis. Places are limited to allow full participation and interaction with participants.
- Apply by a message to Events@ispl.org providing
 - *Subject:* AI use in Space: Seminar 6 June 2023
 - *Your name:*
 - *Preferred title:*
 - *Job title or occupation:*
 - *Organisation:*
 - *Work email:*
 - *Whether you want to pay by credit or debit card*
- On receiving your application we will send an invoice with details of payment, cancellation, refund and other terms. We will confirm your place on the Seminar on receipt of payment.

FEE

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|----------------------------|------|
| • Full-time Academic* | £180 |
| • Government and Military* | £290 |
| • Others | £400 |
- No VAT is payable.
- Card payments are through Eventbrite that charges the payer a fee.

* Proof of full-time Academic, Government or Military status includes your organisation e-mail address.

CONTACT

- All enquiries: Events@ispl.org

PROGRAMME

1. INTRODUCTION – 12:30 - 12.35*

- Welcome and Seminar overview

2. AI TECHNOLOGY AND FEATURES – 12:35 – 13:35

- Introduction to AI
- Terminology and interpretations
- Capabilities and characteristics
- Applications in space
- Current trends and future developments
- Discussion and questions

BREAK – 13:35- 13.50

3. POLICY CONSIDERATIONS AND DEVELOPMENT - 13.50 – 15:00

- State political and social responsibility
- Factors affecting policy formulation
- Civil and military use policy distinction
- International policy approaches – EU, US and Asia
- Use in Space
 - Autonomous manoeuvring:
 - collision avoidance; large constellations in LEO; debris removal; spaceflight; robotic exploration; planetary defence
 - Satellite data analysis:
 - EO; telemetry; space weather; astronomy
 - Communication network – efficiency and reliability
- Discussion and questions

BREAK – 15:00 – 15:15

4. THE LAWS GOVERNING AI SPACE APPLICATIONS – 15:15 – 16:45

- Sovereign state responsibility - authorisation and continuous supervision
- Liability arising from responsibility and under OST
- Military operations and acts of war
- International legal framework and national approaches
- Elements affecting Responsible Behaviour in Outer Space
- Discussion and questions

BREAK – 16:45 – 16.50

5. SOCIETAL AND ETHICAL CONSIDERATIONS – 16:50 – 17:20

- Societal and ethical elements
- Evidence basis - risks and limitations
- Discussion and questions

6. SUMMARY AND CONCLUSION – 17:20 – 17:30

*** Times given are UTC+1 (London time) and need to be corrected for your local time zone.**

LECTURERS

- GF Dr Gianluca Furano, On-Board Computer Engineer, ESTEC, European Space Agency (ESA)
- JG Prof Maj Jeremy Grunert, US Air Force Academy; Mississippi University Air & Space Law Centre
- SM Prof Sa'id Mosteshar, Barrister; Senior Associate Research Fellow, IALS; ISPL Director
- AT Dr Adriana Cursino Thomé, Technical Adviser, Office for International Affairs, Ministry of Science, Technology and Innovation (MCTI), Brazil
- TvB Tsvetelina van Benthem, Lecturer and Researcher in International Law; Diplomatic Studies Programme, Oxford Institute for Ethics, Law and Armed Conflict; Merton College, University of Oxford