

Dhawan Chair
In Space Policy



Image: NASA

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KING'S
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LONDON
Founded 1829

University of London

COMMERCIALISATION OF SPACE: *OPPORTUNITIES AND CHALLENGES*

24-25 January 2013

Strand, London WC2R 2LS, United Kingdom
Venue: Somerset House, East wing

Organized by:

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In Collaboration with:



McGill

Institute of
Air and Space Law

Institut de
droit aérien et spatial

Montreal, Canada

AND

ISPL

LONDON INSTITUTE OF SPACE POLICY AND LAW

London, England

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CONFERENCE CONTEXT:

Space commercialisation covers a breadth of space related technologies, capabilities and services, both space-based as well as ground-based, that are generally exploited to generate revenue by governments and aerospace companies. Much of the space capabilities developed so far are beginning to be exploited not only commercially as multi-national companies have expanded their business activities but also for humanitarian applications such as alleviation of poverty and diseases and management of refugees resulting from droughts and conflicts for which space capabilities could be used by appropriate United Nations agencies. Overall space economy reached \$289.77 billion in 2011 with major contribution coming from commercial activities rather than from government spending.

Potential benefits of capabilities developed in outer space for people on Earth are well established in today's increasingly connected world. Thus, under the Dhawan Chair, which has recently been conceptualised in the Department of War Studies, King's College (London, England) the initial focus will be on the civil uses and commercialisation of space activities. In this context, this two-day Conference at King's College London is organised, in collaboration with McGill University's Institute of Air and Space Law (Montreal, Canada) and London Institute of Space Policy and Law (London, England), with participation by several invited experts from different countries with developed space programmes and related commercial activities.

CONFERENCE OBJECTIVES:

The main objectives of the Conference are to:

- (a) assess critically whether commercialization of space is benefiting all countries and peoples irrespective of their degree of economic or scientific development;
- (b) identify precisely critical challenges to commercialization of space and to propose viable solutions to address these challenges;
- (c) how to achieve a balance between commercial benefits and benefits derived from space capabilities for economic development through exploitation of Earth's natural resources in developing countries; and
- (d) develop a model of public-private relationship by studying different cases and identifying a successful model (or its factors).

The results of the Conference will be published in a report under the Dhawan Chair.

PROGRAMME

Thursday 24 January

09:00-09:30 Tea/Coffee and registration

09:30-09:45 Welcome – **Sir Rick Trainor (Principal)**

and

Professor Paul Stephen Dempsey (Director, Institute of Air and Space Law, McGill University)

Session 1- An overview of Space Commercialisation

Moderator: Mark Ashwell

Rapporteur: Emily Fei

09:45-10:10 “An overview of space commercialisation”, **Bhupendra Jasani, (Visiting Professor, King’s college London)**

Session 2 - Legal issues

Moderator: Joanne Wheeler, (Partner, CMS Cameron McKenna)

Rapporteur: Emily Fei

10:10-10:35 “Overview of space law - enough or too little? Legal status of mining asteroids and other celestial bodies”, **Ram Jakhu (Associate Professor, Institute of Air and Space Law, McGill University)**

10:35-11:00 “Legality of the use of commercial satellite-based imagery in international law – e.g. Spratly Islands dispute”, **Sa’id Mosteshar, (Director, London School of Space Policy & Law)**

11:00-11:20 Tea/coffee

11:20-11:45 “Need for National Space Laws”, **Paul Stephen Dempsey, (Director, Institute of Air and Space Law, McGill University)**

11:45-12:10 “To what extent MTCR/ITAR/possible future Code of Conduct for space activities hamper cooperation and commercial evolution in activities in space?”, **Bhupendra Jasani, (Visiting Professor, King’s college London)**

Session 3 - Communications satellites

Moderator: Ram Jakhu (Associate Professor, McGill University)

Rapporteur: Mutti Anggitta

12:10-12: “Title to be confirmed” **James Cemmell (Director of Satellite Operations, Inmarsat)**

12:35-13:00 “Defence communications satellites – Lessons learnt from a privately financed space programme”, **Simon Kershaw (Executive Director, Astrium Services Government)**

13:00-14:25 Lunch

14:25-14:50 “Cyber security of critical space assets, satellite-based communications and data”, **Group Captain Martin Johnson/James Attwood**

14:50-15:15 35 “Managing risks in space”, **Aarti Holla-Maini (Secretary General, European, Satellite Operators Association)**

Session 4 - Earth Observation

Moderator: Ambassador Ciro Arevalo Yepes (President, Regional Group for Latin America and the Caribbean, IAF, France)

Rapporteur: Mutti Anggitta

15:15-15:40 “Prospects of commercialisation of high-resolution SAR data ”, **Donatella Giampaolo/Luca Pietranera**

15:40-16:05 “Commercial insight and geospatial intelligence – Developments and opportunities”, **Vic Leonard (Technical Solution Manager, DigitalGlobe)**

16:05-16:30 Tea/Coffee

16:30-16:55 “Exploitation of Automatic Identification System (AIS) and Synthetic Aperture Radar (SAR) for enhanced maritime surveillance safety and security” **John Allan (Vice President, ExactEarth)**

18:30-20:30 Reception: Networking and refreshments in the Old Committee Room, King’s College London

Friday 25 January

Session 5 - Manufacturing space assets

**Moderator: Stuart Eves (Engineering and AIT Director
Astrium Satellites, EADS Astrium Limited)**

Rapporteur: Morena Priori

09:30-09:55 “Small satellites-development and future”, **Sir Martin Sweeting (Group CEO, Surrey Satellite Technology Ltd UK) presented by Stuart Eve (Lead Mission Concept Engineer, Surrey Satellite Technology Ltd UK)**

09:55-10:20 “Commercial launchers, satellites, ground facilities and market – way forward for India”, **Nilanjan Routh, (Indian Space Research Organisation, India)**

10:20-10:45 Tea/Coffee

10:45-11:20 “How robust are space assets from direct physical or electronic interferences?”, **Patrick Wood (Engineering and AIT Director Astrium Satellites, EADS Astrium Limited)**

Session 6 - Space transportation

Moderator: Kostas Iatrou (Managing Director, Air Transportation News)

Rapporteur: Gabrielle Ko

11:20-11:45 “Future space vehicles”, **Kostas Iatrou (Managing Director, Air Transportation News)**

11:45-12:10 “World launchers launch sites and launch market”, **Rachel Villain/ (Euroconsult)**

12:10-12:35 “Public private partnership-Main issues”, **Jean Baptiste Thepaut, (Euroconsult)**

12:35-14:00 Lunch

Session 7 - Space tourism

Moderator: Michael Simpson, (Executive Director, Secure World Foundation)

Rapporteur: Gabrielle Ko

14:00-14:25 “An artist’s/astronaut’s view of Earth from space”, **Namira Salim, (Founding astronaut on Branson’s project and an artist and explorer),**

14:25-14:50 “What can commercial activities do to reduce space Debris?”, **Rushi Ghadawala, (President, Aryavarta Space Organisation)**

14:50-15:15 Tea/coffee

Session 8 - Ethics of space commercialisation

Moderator: Gérard Brachet (President, Air and Space Academy, France)

Rapporteur: Morena Priori

15:15-15:40 “Ethics of commercial space with particular emphasis on exploitation of celestial bodies” **Mervyn Frost, (Head, Department of War Studies, KCL)**

15:40-16:05 “Future of space commercialisation – Mining asteroid and celestial Bodies”, **Michael Simpson, (Executive Director, Secure World Foundation)**

16:05-16:30 How can commitments to corporate responsibility and to economic and social development of communities at large be reconcilable?”
Anna Hill, (Founder CEO, Space Synapse Systems Ltd)

16:30-17:30 Panel discussions: Ram Jakhu, Mark Dickinson, Michael Simpson,
Bhupendra Jasani

17:30 Disperse