



Final Program

Manfred Lachs Conference on the Regulation of Emerging Modes of Aerospace Transportation

24 and 25 May 2013

Organized by:

Institute of Air and Space Law, McGill University
International Civil Aviation Organization
International Association for Advancement of Space Safety

In Collaboration with:

International Foundation for Aviation, Aerospace & Development

Venue:

Centre Mont-Royal, 2055 Metcalfe, Montréal, Québec, H3A 1X7
www.centremontroyal.com

Financially supported by:

Erin J. C. Arsenault Fund at McGill University

For More Information Contact:

Email: isavella.vasilogeorgi@mail.mcgill.ca

➤ **RATIONALE:**

Many remarkable achievements have been made in the evolution of both air and space transportation systems over the last few decades. Space transportation systems continue their rapid technological and commercial development. The long-standing issue an international legal boundary between the airspace and outer space legal regimes has become even more pressing due to the emergence of aerospace transportation systems; i.e. vehicles that are capable of seamless operation within both the airspace and outer space. As these new and emerging modes of aerospace transportation continue to develop, it is envisaged that they will soon be used in regularly transporting people and freight from point-to-point on the surface of the Earth through the airspace and outer space.

Since the trajectory followed by an aerospace vehicle will normally cut through portions of airspace and outer space, it would be subject to different international legal regimes depending on where it is located on the trajectory at any point in time. Thus, an aerospace vehicle could be considered to be an aircraft while flying in the airspace. The same vehicle could also be considered to be a space object when passing through outer space. This duality of identity and classification of aerospace vehicles raises several important questions and unprecedented challenges related to the safety of both aviation and space transportation, navigational and communication services, airworthiness and space worthiness, personal training and certification, use of aerodromes and spaceports, traffic rights, liability for damage and injury, scope of jurisdiction of international organizations such as the International Civil Aviation Organization (ICAO) as well as national regulatory authorities, only to mention a few.

These issues and challenges are not restricted to any one discipline. As such, an international and interdisciplinary approach is required in order to objectively examine and appropriately address these and other related issues.

➤ **CONFERENCE OBJECTIVES:**

The main objectives of the Conference are to:

- (a) assess the current situation and future plans for aerospace transportation;
- (b) critically examine and identify precisely the regulatory challenges to operation of aerospace vehicles; and
- (c) suggest viable policy and regulatory steps (mechanisms) that may be considered by States and other stakeholders to facilitate aerospace transportation and to ensure the safety of global aviation.

The results of the Conference will be presented at major appropriate international fora. The papers presented at the Conference will be published in a book and distributed worldwide.

FINAL PROGRAM

DAY ONE: FRIDAY, 24 MAY 2013

08:30-09:30 Registration/Tea/Coffee

09:30-09:45 Welcome: Paul S. Dempsey, McGill IASL
Nancy Graham, ICAO
Tommaso Sgobba, IAASS

09:45-11:00

Session – 1: Technological and Commercial Developments

What are the latest technological and commercial developments related to aerospace transportation?

- Latest and future technological and Commercial developments
 - i. Vehicles (e.g. SpaceShipTwo, Space X Dragon, Excalibur Almaz, Skylon , etc.)-
 - ii. Spaceports (e.g. Spaceport America, Malaysia Spaceport, etc.)
- Overview of common requirements of /issues related to aerospace operations (e.g. Certification of vehicles, Navigation requirements, Licensing, Separation standards, etc.)
 - i. Vulnerability of Space-based navigation systems (e.g. debris)
 - ii. Space weather forecasts distribution
 - iii. Space debris risk for aviation

Moderator: Paul Fitzgerald, McGill IASL

Reporter: Irene Ekweozoh, McGill IASL

Speakers:

- Andy Quinn, Saturn SMS Ltd, UK & Chair IAASS Suborbital Safety Technical Committee.
- Chuck Lauer, Rocketplane, USA
- Norul Ridzuan, Space Tourism Society Malaysia Chapter, Malaysia
- Lance Erickson, Embry-Riddle Aeronautical University, USA
- Christopher Stott, ManSat, Isle of Man (via video conference link)

11:00-11:20 Tea/Coffee

11:20-13:00

Session – 2: The Big Picture

To what extent is the current regime governing international air transportation relevant to aerospace transportation?

- Overview of the existing situation in aviation and space regulation
- Understanding of what is considered aviation, sub orbital space and space.

- High level presentation of ICAO responsibilities
- High level presentation of space law development
- Prescriptive safety standards (aviation) vs goal-oriented safety standards (space, example ESA Human Rating requirements).

Moderator: Tommaso Sgobba, IAASS

Reporter: Ashleigh Tomlinson, McGill IASL

Speakers:

- Joe Pelton, Executive Board, IAASS
- Peter Haanappel, Em. Professor, Leiden University, the Netherlands
- Sanat Kaul, IFAADD, India
- Francesco Gaspari, Demetra Research Center, Italy
- Mitch Fox, ICAO

13:00-14:00 Lunch

14:00-15:30

Session – 3: Existing ICAO SARPS Relating To Aircraft

To what extent are the current ICAO SARPS relevant for aerospace transportation vehicle operations?

- Airworthiness of aircraft
- Licensing of personnel
- Aircraft nationality and registration requirements
- Navigation, communication equipage
- Passenger rights
- Dangerous cargo
- Safety certification of space systems
- Astronauts Training/Certification.

Moderator: Jean-Bruno Marciacq, EASA, Germany

Reporter: Sarah Mountin, McGill IASL

Speakers:

- Carlos Cirilo, IATA
- Mitch Fox, ICAO
- Tommaso Sgobba, IAASS
- Michel Tognini, ESA Astronaut

15:30-15:50 Tea/Coffee

15:50-17:30

Session – 4: Existing ICAO SARPS relating to Air Traffic Control

To what extent are the current ICAO SARPS relevant for aerospace transportation requirements for Air Traffic Control Services?

- Communications, Navigation and Surveillance
- Air Traffic Control Services and ATC system capabilities
- Search and Rescue / Accident investigations
- Licensing of personnel
- Rules of the Air applicability
- Aviation emergency management for RLV re-entry
- Interfaces between space traffic and aviation traffic in the airspace
- Accidents investigation in space programs.

Moderator: Martin Griffin, ICAO

Reporter: Upasana Dasgupta, McGill IASL

Speakers:

- Chris Dalton, ICAO
- Paul Wilde, FAA, USA
- Daniel Murray, FAA, USA
- Bradley Hayward, AvLaw Aviation Consultants, Australia
- Michael Rossell, ACI, Canada

19:00-22:00 Gala Dinner: Foyer / Salon International 1, Centre Mont-Royal, 2055
Metcalfe Street
Key Note Speaker: George Nield, FAA, USA

DAY TWO: SATURDAY, 25 MAY 2013

09:30-11:00

Session – 5: Existing ICAO SARPS Relating to Aerodrome Operations

To what extent are the current ICAO SARP's relevant for aerospace transportation aerodrome operations?

- Facilitation
- Aerodromes
- Environment
- Dangerous cargo ground requirements
- Spaceports safety and environmental issues

Moderator: Yaw Nyampong, McGill IASL

Reporter: Elizabeth Kiguta, ICAO

Speakers:

- Katherine Rooney, ICAO
- Arun Rao, Consultant, India
- Diane Howard, McGill IASL
- Sa'id Mosteshar, London Institute of Space Policy and Law, UK

11:00-11:20 Tea/Coffee

11:20-13:00

Session – 6: National Regulatory and Policy Developments

How may national aviation and space industries regulation interface/interact with the regulation of aerospace transportation?

How national aviation policies and regulatory regimes ought to be adapted for facilitating aerospace transportation and ensuring aviation safety?

- Overview of National developments
- FAA presentation of developments in the USA
- EASA presentation of developments in Europe
- China, Australia (others)

Moderator: Ram Jakhu, McGill IASL

Reporter: Andrea DiPaolo, McGill IASL

Speakers:

- George Nield, FAA, USA
- Jean-Bruno Marciacq, EASA, Germany
- Ricky Lee, Space Lawyer, Australia
- Taro Kuusiholma, CAA Finland
- Jinyuan Su, Xi'an Jiaotong University School of Law, China

13:00-14:00 Lunch

14:00-16:00

Session – 7: The Way Forward (Round Table Discussion)

What would be the most appropriate and suitable international institutional mechanism for the regulation of aerospace transportation.

Is it desirable and possible to achieve effective and integrated (civil, state, military and space transport) traffic management?

Is self-regulation, taking classification societies as model, a good approach for aerospace regulation?

Moderator: Paul S. Dempsey, McGill IASL

Reporter: Isavella Maria Vasilogeorgi, McGill IASL

Speakers:

- Nancy Graham, ICAO
- Jiefang Huang, ICAO
- George Nield, FAA, USA
- Oscar Garcia, InterFlight Global Corporation, USA
- Tommaso Sgobba, IAASS
- Jean-Bruno Marciacq, EASA, Germany

Conference Organizing Committee

- Maria D'Amico, McGill Institute of Air & Space Law, Canada
- Paul Stephen Dempsey, McGill Institute of Air & Space Law, Canada
- Martin Griffin, International Civil Aviation Organisation, Canada
- Ram Jakhu, McGill Institute of Air & Space Law, Canada (Chair)
- Tommaso Sgobba, IAASS, the Netherlands
- Ashleigh Tomlinson, McGill IASL - ICAO, Canada
- Isavella Vasilogeorgi, McGill Institute of Air & Space Law, Canada