

# The McGill University Centre for Research in Air & Space Law

## 2016-2017 Academic Year Activities

(1 June 2016 to 30 May 2017)

Prepared By

Ram S Jakhu, Director  
&  
Md Tanveer Ahmad, Executive Director

### ***Introduction:***

The Centre for Research in Air and Space Law (CRASL) is the research wing of the Institute of Air and Space Law, which was established in 1951 and based at the Faculty of Law of McGill University. The CRASL was established in 1 September 1976 (with the official consent of the *Ministère de l'éducation du Québec*). The Centre's research and outreach activities are international, interdisciplinary, and ambitious in nature. The Centre is headed by the Director, day-to-day management is conducted by the Centre's Executive Director, and its activities are overseen by a Board of Directors. Currently, Prof Lara Khoury chairs the Board of Directors.

At the last Annual CRASL Board Meeting, held on Friday, 24 March 2017, the Board accepted the proposals by the Director to formalise and strengthen the organisational structure on the basis of its By-Laws that were adopted in 2015. For this purpose, the Board confirmed the appointment of Prof Dr. Paul S Dempsey as an Associate Member, Dr. Md Tanveer Ahmad as the Executive Director, and Mr. Kuan-Wei (David) Chen as the Director of Publications. In addition, the Board also authorised the Director to appoint more full members and associate members. On his invitation, several of experts have accepted to join the CRASL as Associate Members. They are: Dr. Ludwig Weber (Adjunct Professor of IASL for the last 15 years); Dr. P Paul Fitzgerald (Adjunct Professor of IASL); Dr. Donald H Bunker (Adjunct Professor of IASL for the last 15 years); Dr. Francis Schubert (Adjunct Professor of IASL for the last 10 years); Dr. Yaw Nyampong (Sessional Lecturer of IASL); Prof. Genevieve Saumier (Full Professor, Faculty of Law); Prof. Richard Janda (Associate Professor, Faculty of Law); Prof. Frederic Mégret (Associate Professor, Faculty of Law); Prof. Catherine Walsh (Full Professor, Faculty of Law); Prof. Fabien Gélinas (Full Professor, Faculty of Law); Prof. Lionel Smith (Full Professor, Faculty of Law); Prof. Allison Christians (Associate Professor, Faculty of Law); Prof. Payam Akhavan (Associate Professor, Faculty of Law); Prof. Peter PPC Haanappel (former Professor and Associate Dean, Faculty of Law); Prof. Steven Freeland (Full Professor and Dean, School of law, University of Western Sydney, Australia); Prof. Jinyuan Su (Professor and Assistant Dean, School of Law, Xi'an Jiao Tong University, China); and Dr. Joseph Pelton (former Dean, International Space University, France).

For more information about the CRASL, visit: <http://mcgill.ca/iasl/centre>

During the 2016-2017 academic year, the CRASL carried out extensive research activities, which are listed as follows:

**Research and publications:**

In 2016-2017 academic year, McGill University's Centre for Research in Air and Space Law (CRASL) published the following research:

- *Annals of Air and Space Law*, vol XLI (2016).
- *Occasional Paper II: L'envol des drones civils: Appréhension par le droit français d'une pratique émergente*
- *Occasional Paper III: Seeking Global Environmental Harmony in Aviation*
- *Occasional Paper IV: Settlement of Dispute at ICAO and Sustainable Development*
- *Occasional Paper V: International Civil Aviation and Sustainable Development: The Application of WTO Law*
- *Occasional Paper VI: Sustainable Flight Management and Aviation*
- *Occasional Paper VII: Environmental Sustainability Measures for Airports*
- *Occasional Paper VIII: Exporting Environmental Values through Open Skies*
- *Occasional Paper IX: Sustainable Development Initiatives in the Aviation Industry in Latin America: Focus on Brazil*
- *Occasional Paper X: Getting to Global Cooperation: ICAO and Climate Change*
- *Occasional Paper XI: Global Civil Aviation Emissions Standards – from Noise to Greener Fuels*
- *Occasional Paper XII: Technology Developments and Renewable Fuels for Sustainable Aviation*
- *Occasional Paper XIII: Sustainable Aviation and the Transfer of Environmentally Sound Technologies to Africa: Paradoxes, Barriers and Prospects*
- *Occasional Paper XIV: Inspirations from Sustainable Maritime Development*
- *Occasional Paper XV: Aviation and Sustainable Development: Perspectives from the Asia-Pacific*
- *Occasional Paper XVI: Catastrophic aviation emissions: The Namuhs meet the Humans*
- *Occasional Paper XVII: Aviation Manufacturer Held Subject to State Law Standards in US Products Liability Action*
- *Occasional Paper XVIII: Sustainable Tourism and the Impact of Climate Change on the Caribbean*
- *Occasional Paper XIX: What does Philosophy do for Space Jurisprudence and Implementing Space Law? Secular Humanism and Space Migration Essential for Survival of Humankind Species and its "Essence"*
- *Occasional Paper XX: The Missing Link in the Global Aviation Safety and Security Network: The Case of Taiwan*

**Prof. Ram Jakhu:**

1. Ram S Jakhu & Paul Stephen Dempsey, eds, *Routledge Handbook of Space Law* (Routledge, 2017)
2. Ram S Jakhu & Joseph N Pelton, eds, *Global Space Governance: An International Study* (Springer, 2017).
3. Ram S Jakhu & Joseph N Pelton, "International Study on Global Space Governance", *Room – The Space Journal* 1(11) (April 2017) 42.
4. Ram S Jakhu, Joseph N Pelton & Yaw Otu Mankata Nyampong, *Space Mining and its*

*Regulation* (Springer, 2016).

5. Ram Jakhu, “Sixty Years of Development of International Space Law” in Stephan Hobe, ed, *Air Law, Space Law, Cyber Law – the Institute of Air and Space Law at Age 90*, vol 37 (Carl Heymanns Verlag, 2016) 75.
6. Ram S Jakhu & Tanveer Ahmad, “World needs strong space governance system”, *Room – The Space Journal* 1(11) (April 2017) 28.
7. Ram S Jakhu & Yaw Otu Mankata Nyampong, “Some Legal Aspects of Space Natural Resources” (2016) 18:1 *European Journal of Law Reform* 86.
8. Ram Jakhu & Steven Freeland, “The Applicability of the United Nations Space Treaties during Armed Conflict” (2016) *Proceedings of the International Institute of Space Law* 157.
9. Ram Jakhu, Diane Howard & Andrea DiPaolo, “Legal Aspects of Solar Power Satellites” published in Leslie Tennen and Patricia Sterns, eds, *Private Law, Public Law, Metalaw and Public Policy in Space - A Liber Amicorum in Honor of Ernst Fasan* (Springer, 2016).
10. Ram Jakhu & Aram Kerkonian, “Need for and Scope of National Space Law for Canada” – a study carried out for the Department of Global Affairs, Ottawa, Canada, July 2016.
11. Ram Jakhu & Aram Kerkonian, “Independent Review of the Remote Sensing Space Systems Act” carried out for the Department of Global Affairs Ottawa, Canada, February 2017, and was table in the Canadian Parliament on 5 April 2017.

*Prof. Paul Dempsey:*

1. *Public International Air Law*, 2nd ed (Montreal: McGill University Centre for Research in Air & Space Law, 2017).
2. Paul Stephen Dempsey & Ram S Jakhu, *Routledge Handbook of Public Aviation Law* (Routledge, 2017).
3. *Space Law* (Oxford University Press, 2016) (five-volume treatise updated quarterly).

*Dr. Paul Fitzgerald:*

1. “The Quest for Space: Declining Size, Increasing Demands” (2017) 16:2 *Issues in Aviation Law & Policy* 259.

*Grants:*

1. Ram Jakhu; Aerospace International research Centre (Austria); US\$ 10,000; October 2016 – February 2017; to support the “McGill Manual on International Law Applicable to Military Uses of Outer Space: First Project Plenary” project.
2. Ram Jakhu; Aerospace International research Centre (Austria); US\$ 5,000; April 2017; to support the 5<sup>th</sup> Manfred Lachs International Conference on Global Space Governance and the UN 2030 Agenda (2017).
3. Ram Jakhu; Canadian Department of National Defence Engagement Program’s Targeted Engagement Grant Program; December 2016 – October 2017; \$13,750.00 for hosting a Workshop related to the “McGill Manual on International Law Applicable to Military Uses of Outer Space” project (Reviewed by Research Grants Review Committee).
4. Ram Jakhu; Canadian Department of National Defence Engagement Program’s Targeted Engagement Grant Program; March – September 2016; \$ 25,000 to support the “McGill Manual on International Law Applicable to Military Uses of Outer Space: First Project

- Plenary” project (Reviewed by Research Grants Review Committee).
5. Ram Jakhu; Canadian Department of National Defence Engagement Program’s Targeted Engagement Grant Program; March – September 2016; \$ 25,000 for hiring a Research and Administrative Assistant for the “McGill Manual on International Law Applicable to Military Uses of Outer Space” project (Reviewed by Research Grants Review Committee).
  6. Ram Jakhu; Canadian Department of Global Affairs, Ottawa, Canada, from November 2016 – February 2017, \$ 10,000 for conducting an Independent Review of the 2017 Remote Sensing Space Systems Act of Canada.

***CONTINUING Grants:***

1. Ram Jakhu; SSHRC; three-year (24 March 2016 – 23 March 2019); \$ 190,450, partnership award for drafting the *McGill Manual on International Law Applicable to Military Uses of Outer Space*.
2. Ram Jakhu, (*Donation on the basis of a Research Proposal*) Erin J.C. Arsenault Trust Fund of Colorado (US), for ten years (2011-2020); worth \$ 3.32 million, for Research and Outreach Activities entitled “Space Security Through the Rule of Law and Sustainable Space Development”. (The donor is always impressed by management of this project, and often gives substantial additional funds without any solicitation).

***Involvement in the community:***

***Workshops, Seminars & Conferences:***

1. 10<sup>th</sup> Annual McGill Conference on International Aviation Liability and Insurance, 22-23 June 2017, Montreal, Canada.
2. MILAMOS Project Workshop II, 20-23 June 2017, New Delhi, India.
3. 5<sup>th</sup> Manfred Lachs International Conference on Global Space Governance and the UN 2030 Agenda, 5-6 May 2017, Montreal, Canada.
4. Montreal Asgardia Meeting, 8 May 2017, Faculty of Law, McGill University, Montreal, Canada.
5. Public Event on The Outer Space Treaty at 50, 3 May 2017, Montreal, Canada.
6. Space Security Index, 2-3 May 2017, Montreal, Canada.
7. 4<sup>th</sup> McGill-Adelaide Strategic Space Law Course, 5-9 June 2017, Adelaide, Australia.
8. MILAMOS Project Workshop I, 20-23 February 2017, Adelaide, Australia.
9. Inaugural Plenary of the MILAMOS Project, 3-5 October 2016, Montreal, Canada.

***Prof. Ram Jakhu delivered the following presentations:***

1. Presented a paper on “The Relationship between the Outer Space Treaty and Customary International Law” on 27 September 2016, Colloquium on the Law of Outer Space, Guadalajara, Mexico. (co-authored with Steven Freeland).
2. Made a presentation on “Conflicts in Space and the Rule of Law” on 4 April 2016; La Chaire Programme of Université de Paris I la Sorbonne, Paris, France. <https://www.youtube.com/watch?v=zmqEgQvqpY>
3. Made a presentation on “Existing Global Space Governance and the Way Forward” on 22 November 2016; at the United Nations/United Arab Emirates High Level Forum: *Space as a driver for socio-economic sustainable development*; Dubai, UAE;

4. Made a presentation on “Global Space Security and Global Space Governance” on 27 September 2016, at the IAF Space Security Committee, International Astronautical Congress, 25 September 2016, Guadalajara, Mexico.
5. Presented a paper titled “Regulation of Safety of Space Mining and its Implications for Space Safety” on 18-20 May 2016, at the 8th IAASS Conference, Melbourne, Florida, US. (co-authored with Joseph Pelton).
6. Made a presentation on “Need for a Manual on International Law Applicable to Military Activities in Outer Space” on 5 April 2016, SEEA “Sécuriser l’espace extra-atmosphérique, éléments pour une diplomatie spatiale” (“Securing outer space elements for a space diplomacy”) at Ecole militaire, Paris, France.

*Prof. Paul Dempsey delivered the following presentations:*

1. 13<sup>th</sup> annual Assad Kotaite Lecture: “The Future of Air Law in the 21st Century” held on 1 December 2016 at the UN ICAO Headquarters, Montreal, Quebec, Canada.

*Dr. Paul Fitzgerald delivered the following presentation:*

1. Presented a paper on “Intercontinental Space Flight-Learning from the Concorde” at the International Conference: “Contemporary Issues in Air & Space Laws”, University of Sharjah, UAE, 22-23 February 2017.

*Dr. Olga Stelmakh delivered the following presentations:*

1. “Capacity-Building of the International Legal Framework for Mitigating Consequences from Non-Operational Small Satellites: Advancing Space Law Towards NewSpace Paradigm” at the IISL Colloquium on the Law of Outer Space, International Astronautical Congress (IAC 2016), Guadalajara, Mexico, 30 September 2016.
2. “The Policy and Market Context for International Space Resources Development: European Perspective” at the Federal Aviation Administration’s Center of Excellence on Commercial Space Transportation’s Annual Technical Meeting in Las Cruces, New Mexico, US, 13 October 2016.
3. “Legal & Regulatory Perspectives for Protecting the Space Environment from Debris” at the 34th AIAA International Communications Satellite Systems Conference (ICSSC), Cleveland, Ohio, US, 19 October 2016.
4. “Space Situational Awareness and Space Traffic Management: Towards their Comprehensive Paradigm” at the 3rd Space Traffic Management Conference, Embry Riddle University, Daytona Beach, Florida, US, 17 November 2016.
5. “Global Space Governance for Sustainable Development” at the First UN/UAE High Level Forum: *Space as a driver for socio-economic sustainable development*, Dubai, UAE, 22 November 2016.
6. “Protecting Space Assets” at the Space Security Symposium, Global Space Congress 2017, Abu Dhabi, UAE, 1 February 2017.
7. “Game-Changing Paradigm of Commercial Space: Renaissance of the Legal and Regulatory Framework” at the Space Law and Regulation Panel, Global Space Congress 2017, Abu Dhabi, UAE, 1 February 2017.
8. “Global Space Governance for Sustainable Development” at the Global Space and Technology Convention, Singapore, Singapore, 24 February 2017.



*Dr. Tanveer Ahmad delivered the following presentations:*

1. Panelist of CIGI Workshop: “Climate Change and Aviation Law: Offsets and the Paris Agreement: Legal and Functional Considerations”, held during the 39<sup>th</sup> ICAO Triennial Assembly, at the ICAO Headquarters, Montreal, Canada, on 6 October 2016.
2. “Promotion for Development of National Space Legislation in Developing States to Ensure Global Space Governance”, presented by Kuan-Wei Chen at the 10<sup>th</sup> United Nations Workshop on Space Law: Contribution of Space Law and Policy to Space Governance and Space Security in the 21st Century, Vienna, Austria, 5-8 September 2016.

*Mr. Kuan-Wei Chen delivered the following presentations:*

1. Made a presentation on “The Manual on International Law Applicable to Military Uses of Outer Space (*MILAMOS*) Project” at the 12<sup>th</sup> Ilan Ramon International Space Conference: Bringing Space Down to Earth, Herzliya, Israel, 30-31 January 2017.
2. Presented a paper on “Innovative Ways to shape the Global Governance of Outer Space” at The First BIT Space Law International Symposium: “Global Governance of Outer Space: Status quo and Challenges, Foundations and Frontiers”, Beijing, China, 29 October 2016.
3. “Breaking the Traditional Orbit: Alternative Means of Shaping Law and Policy in Outer Space” at the 10<sup>th</sup> United Nations Workshop on Space Law: Contribution of Space Law and Policy to Space Governance and Space Security in the 21st Century, Vienna, Austria, 5-8 September 2016.

*Dr. Eytan Tepper delivered the following presentations:*

1. “Small Satellite Challenges to Global Space Governance” at the 12<sup>th</sup> Ilan Ramon International Space Conference: Bringing Space Down to Earth, Herzliya, Israel, 30-31 January 2017.
2. Panelist at the Space Law Speaker Panel: “New Challenges in Space and Global Space Governance” held at Law & Politics Club, University of Toronto, Canada, on 1 December 2016.

*Ms. Maria Manoli delivered the following presentations:*

1. “Education in the Field of Space Law and its Importance for the Private Space Sector” at the Dawn of Private Space Science Symposium 2017 (DPSS2017), Columbia University, US, 3-4 June 2017.
2. “The Legality of Space Natural Resources Commercial Exploitation in a Globalized Context” at the V National Conference of Air Law and Technology, ELSA, Rzeszów, Poland, 24-26 April 2017.
3. Panelist of CIGI Workshop: “Climate Change and Aviation Law: Offsets and the Paris Agreement: Legal and Functional Considerations”, held during the 39<sup>th</sup> ICAO Triennial Assembly, at the ICAO Headquarters, Montreal, Canada, on 6 October 2016.

*Mr. Aram Kerkonian delivered the following presentations:*

1. “Legal Issues of Cross-Border Sub-Orbital Flight” at the Federal Aviation Administration’s Center of Excellence on Commercial Space Transportation’s Annual Technical Meeting in Las Cruces, New Mexico, US, 10 October 2016.

2. “The Authorization and Licensing of Small Satellite Missions” at the International Telecommunication Union’s Small Satellite Conference in Santiago, Chile, 8 November 2016.

### ***Milestones***

In May 2017, the CRASL concluded an agreement with HeinOnline, a legal publisher, periodical subscription agent, and the world’s largest distributor of legal periodicals from the United States, for the publication and distribution of all CRASL publications, including the *Annals of Air and Space Law*. The idea of getting all CRASL publications online has been under consideration for the better part of the past decade. All CRASL publications will become available online in the HeinOnline Digital Library, except the publications from the last two/three years, which can be purchased. In addition, HeinOnline will market/promote and distribute physical copies of our existing books, as well as produce/print, market, and distribute our future publications. It is believed that the Agreement will help us in saving time and money, expanding our market and visibility, attracting more high quality papers, and generating more revenue.

The Inaugural Plenary of the McGill Manual on International Law Applicable to Military Uses of Outer Space (MILAMOS) Project was held in Montreal on 3-5 October 2016. This three-year Project has been initiated by the CRASL, and is being carried out in collaboration with the University of Adelaide, Australia and the University of Exeter, UK. Over 40 legal and technical experts from various countries are participating in the Project, which has its Secretariat at the CRASL. This CAD\$ 1.5 million project, aimed at producing the McGill Manual, will be a highly innovative one and will be carried out through international workshops being organised in various parts of the world. The first such workshop was held in Adelaide, Australia, on 20-23 February 2017 and the second one held in New Delhi, India, on 20-23 June 2017.