

# PROCEEDINGS OF THE INTERNATIONAL INSTITUTE OF SPACE LAW



## 2009

**52nd Colloquium on the Law of Outer Space**

**24th IAA–IISL Scientific/Legal Roundtable**

(12–16 October 2009, Daejeon, Republic of Korea)

**IISL–ECSL Symposium held on the occasion of the  
48th Session of the Legal Subcommittee of UNCOPUOS**

(23 March 2009, Vienna, Austria)

**4th Eilene Galloway Symposium on Critical Issues in Space Law**

(10 December 2009, Cosmos Club, Washington, D.C.)

**18th Manfred Lachs Space Law Moot Court Competition 2009**

(15 October 2009, Daejeon, Republic of Korea)

*and other materials*



*The World's Forum for Aerospace Leadership*

**Published and Distributed by the  
AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS**

**Editor:**

Corinne M. Jorgenson  
Washington, D.C., USA

Copyright © 2010 by the  
American Institute of Aeronautics and Astronautics

ISBN-13: 978-1-60086-772-9

ISBN-10: 1-60086-772-3

All rights reserved. No part of this volume may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without permission from the publisher. The views expressed herein are those of the authors and do not necessarily represent the views of either the IISL or AIAA.

Printed in the U.S.A.

# TABLE OF CONTENTS

## Preface

*T. Masson-Zwaan* ..... ix

**Directory of IISL Board of Directors** ..... xii

## Standing Committee Report

*A.D. Terekhov* ..... xiv

**New Members Elected in 2009** ..... xxix

**Photos of IISL Activities in 2009** ..... xxx

## 52ND COLLOQUIUM ON THE LAW OF OUTER SPACE DAEJEON, KOREA

### SESSIONS

#### 1. NANDASIRI JASENTULIYANA KEYNOTE LECTURE ON SPACE LAW & 1ST YOUNG SCHOLARS SESSION

##### 1.01

**The Law of Outer Space in the General Legal Field (Commonality and Particularities)**

*V.S. Vereshchetin* ..... 3

*Inaugural Nandasiri Jasentuliyana Keynote Lecture on Space Law*

##### 1.03

**Potential Contribution of Japan to the Code of Conduct for Outer Space Activities**

*Y. Kodachi* ..... 15

##### 1.04

**Non-Lawyers' Perspectives on the Manfred Lachs Space Law Moot Court Competition:**

**Recommendations to Promote Space Law Education**

*M. Ansdell, C. Iwata, T. Aganaba, A. Bergman* ..... 21

##### 1.05

**Responsibility and Liability in International Space Law as a Matter of Sequence and Succession**

*J.R. Bonin* ..... 27

##### 1.06

**The Development of International Law on Remote Sensing Activities with the Emphasis on  
International Cooperation**

*M. Fukunaga* ..... 37

##### 1.07

**Space Cooperation in the Asia-Pacific: The Story (or Stories) of APSCO and APRSAF**

*D. K-W Chen, S. Wan* ..... 42

##### 1.08

**Regulation of Space Debris: On the Way Towards International Customer Law?**

*J. Nie* ..... 53

## 2. PEACE IN SPACE: TRANSPARENCY AND CONFIDENCE BUILDING MEASURES

<b>2.01</b>	
<b>Lawful Response to Attacks On Spacecraft and their Support Systems</b>	
<i>J. Rendleman</i> .....	61
<b>2.02</b>	
<b>Missile Launches, Militarization, Weaponization: Security in Space</b>	
<i>C.Q. Christol</i> .....	99
<b>2.04</b>	
<b>Code of Conduct for Space Activities – Evolution or Regression?</b>	
<i>J. Monserrat Filho</i> .....	108
<b>2.06</b>	
<b>Creating Enforcement Mechanisms for the 1976 Registration Convention as a Confidence Building Measure for the Military Use of Outer Space</b>	
<i>R.J. Lee</i> .....	115
<b>2.07</b>	
<b>TCBMs Over the Military Use of Outer Space</b>	
<i>Y. Takaya-Umehara</i> .....	123
<b>2.08</b>	
<b>Peace in Space: A Pragmatic Approach</b>	
<i>V. Gopalakrishnan</i> .....	133
<b>2.09</b>	
<b>Outer Space: Of the People, By the People, and For the People</b>	
<i>V. Leister</i> .....	145
<b>2.10</b>	
<b>The Development of International Norms to Enhance Space Security Law in an Asymmetric World</b>	
<i>P.J. Blount</i> .....	153
<b>2.11</b>	
<b>International Development of Space and Prevention of an Arms Race in Outer Space [PAROS]</b>	
<i>H.J. Cho</i> .....	160
<b>2.12</b>	
<b>Space Situational Awareness: Key to a New Space Security Architecture</b>	
<i>S.A. Kaiser</i> .....	171
<b>2.13</b>	
<b>Let There Be Peace in Space, and on Earth</b>	
<i>S. Ospina</i> .....	178
<b>2.14</b>	
<b>The Place of TCBMs in the Outer Space Security</b>	
<i>A.Y. Kapustin</i> .....	186
<b>2.15</b>	
<b>Is Current International Humanitarian Law Sufficient to Regulate a Potential Conflict in Outer Space?</b>	
<i>B. Baseley-Walker</i> .....	191

### 3. THIRD PARTY LIABILITY ISSUES IN COMMERCIAL SPACE ACTIVITIES

#### 3.01

##### Too-Close Encounters of the Third-Party Kind: Will the Liability Convention Stand the Test of the Cosmos 2251-Iridium 33 Collision?

*F.G. von der Dunk* ..... 199

#### 3.02

##### Legal Problems Concerning Space Debris and Liability Convention

*D.H. Kim*..... 210

#### 3.03

##### Liability for Surface Damage Caused Aerospace Vehicles

*P. Dempsey*..... 221

#### 3.04

##### Third Party Liability Arising from GNSS-Related Services

*S. Kozuka*..... 232

#### 3.05

##### Nuclear Liability – A Feasible Model for the Space Sector?

*L. Viikari*..... 242

#### 3.06

##### The Problem of Absolute Liability on the Moon

*G. Zhukov*..... 251

#### 3.07

##### Facing Up to Third Party Liability for Space Activities: Some Reflections

*L.J. Smith* ..... 255

#### 3.08

##### Interoperability of GNSS, Legal Issues and Implications under Private International Law

*M. Mustaque* ..... 264

#### 3.09

##### Collision Course: 2009 Iridium-Cosmos Crash

*M. Mejia-Kaiser* ..... 274

#### 3.10

##### Determining Liability for Damage Caused Due to Debris in Outer Space: Portal to a New Regime

*U. Mukherjee, A. Mokkalapati* ..... 285

### 4. LEGAL MECHANISMS FOR ENCOURAGING SPACE COMMERCE

#### 4.02

##### A Rightly Balanced Intellectual Property Rights Regime as a Mechanism to Enhance Commercial Earth Observation Activities

*C. Doldirina*..... 301

*Winner of the 2009 Isabella H.Ph. Diederiks-Verschoor Award for Best Paper by a Young Author*

#### 4.03

##### The Advent of a New Era of Commercial Space Tourism and Associated Legal Issues

*A. Ito* ..... 312

<b>4.05</b>	<b>Equity and the Space Tourist</b>	
	<i>Z. O'Brien</i> .....	320
<b>4.09</b>	<b>International Space Cooperation in the Reform and Opening of China over the Past 30 Years</b>	
	<i>L. Shouping</i> .....	331
<b>4.10</b>	<b>Legal Mechanisms for Encouraging Space Commerce: The Indian Model</b>	
	<i>R. Kaul</i> .....	342
<b>4.11</b>	<b>Positing a Concrete Regulatory Framework for Commercialization of Space: The Indian Perspective</b>	
	<i>K. Mukhija, G. Singh</i> .....	353
<b>4.12</b>	<b>Procurement in the European Space Sector</b>	
	<i>S. Hobe, I. Kerner, J.H. Mey</i> .....	368
<b>4.13</b>	<b>Economic and Political Impacts of National Space Legislation in Europe</b>	
	<i>M. Sánchez Aranzamendi, K-U. Schrogl</i> .....	377

## **5. LEGAL CHALLENGES TO EARTH OBSERVATION PROGRAMS WITH PARTICULAR EMPHASIS ON DEVELOPING COUNTRIES**

<b>5.01</b>	<b>Space Law and Science for Sustainable Peace and Biosphere Management through Earth Observation Satellites, Especially in Developing SAARC Countries</b>	
	<i>S. Bhatt</i> .....	387
<b>5.04</b>	<b>A Legal Strategy for the Application of Earth Observation Programs in Central and South America Countries</b>	
	<i>J.A. Becerra Ortiz</i> .....	392

## **6. RECENT DEVELOPMENTS IN SPACE LAW**

<b>6.02</b>	<b>Advance in the Implementation of the French Space Law on Space Operations in the Launcher Field</b>	
	<i>P. Clerc, F. Cahuzac</i> .....	399
<b>6.03</b>	<b>Harmonization of International Space Law and National Space Law - Case Study of Japanese Space Law</b>	
	<i>T. Kosuge</i> .....	407
<b>6.04</b>	<b>The First Basic Space Plan of Japan: What Will Be Changed?</b>	
	<i>S. Aoki</i> .....	413
<b>6.08</b>	<b>Brief Statement on the Legal Regime for Space Elevators</b>	
	<i>P. Larsen</i> .....	426

<b>6.09</b>		
	<b>The Case of Space Robotic Applications in the Evolution of International Space Law</b>	
	<i>C. Jimenez-Monroy</i> .....	429
<b>6.10</b>		
	<b>Progress of Teaching and Research of Outer Space Law in China</b>	
	<i>H. Zhao</i> .....	440
<b>6.12</b>		
	<b>Assessment of Recent NEO Response Strategies for the United Nations</b>	
	<i>A.C. Charania, A. Lukaszczyk</i> .....	456
<b>6.13</b>		
	<b>Bigelow Aerospace's Commodity Jurisdiction Request under ITAR and its Impact on the Future of Private Spaceflight</b>	
	<i>M. Sundahl</i> .....	462

## COLLOQUIUM REPORT

	<b>Report of the 52nd Colloquium on the Law of Outer Space in Deajeon, Korea, October 2009</b>	
	<i>Contributed by Rapporteurs J. Hong, J. Bonin, M. Mejia-Kaiser, M. Sundahl and C. Doldirina,</i>	
	<i>Edited by C. Jorgenson</i> .....	471

## 24TH IAA-IISL SCIENTIFIC/LEGAL ROUNDTABLE

	<b>Program of the Roundtable</b> .....	485
--	--	-----

## UNITED NATIONS

### 2009 IISL-ECSL SPACE LAW SYMPOSIUM HELD ON THE OCCASION OF THE 48TH SESSION OF THE LEGAL SUBCOMMITTEE OF UNCOPUOS VIENNA, AUSTRIA

	<b>Program of the Symposium</b> .....	489
	<b>The Negotiation of the Moon Agreement</b>	
	<i>H. Türk</i> .....	491
	<b>Some Legal and Factual Considerations about the 1979 UN Moon Agreement</b>	
	<i>J-F. Mayence</i> .....	501
	<b>The Common Heritage of Mankind Principle: the Moon and Lunar Resources</b>	
	<i>J.M. de Faramiñán Gilbert</i> .....	504
	<b>Is a New Look Necessary in the Age of Exploration and Exploitation?</b>	
	<i>S. Trepczynski</i> .....	513

THE 4TH EILENE M. GALLOWAY SYMPOSIUM ON CRITICAL ISSUES IN SPACE LAW  
WASHINGTON, D.C., UNITED STATES

PEACEFUL PURPOSES AND USES OF OUTER SPACE

Program of the Symposium.....	525
Report of the Symposium	
<i>P.J. Blount</i> .....	527
Redefining National Security and the Role of International Law to Secure Peaceful Uses of Outer Space	
<i>C. Driscoll</i> .....	529
Economic and Societal Benefits of Peace in Space: Today and Tomorrow	
<i>C. Jorgenson, M. Smith</i> .....	536
Equity and Transparency in the New Province of Humanity	
<i>V. Leister</i> .....	546
An International Policy Response to the Near Earth Object (NEO) Impact Threat	
<i>R. Crowther</i> .....	554
Peaceful Purposes and Chinese Law	
<i>H. Zhao</i> .....	561

18TH MANFRED LACHS SPACE LAW MOOT COURT COMPETITION

CASE CONCERNING THE DEPLOYMENT AND USE OF  
FORCE IN LOW EARTH ORBIT (FORNJOT V. TELESTO)

Introduction .....	583
Problem .....	585
Winning Memorials .....	603
Author Index .....	619