





## 2017 SPACE SECURITY CONFERENCE

"Celebrating the Outer Space Treaty: 50 Years of Space Governance and Stability"

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A Conference organized by the United Nations Institute for Disarmament Research (UNIDIR) in collaboration with the Secure World Foundation and The Simons Foundation Canada

With support from the Governments of the People's Republic of China and the Russian Federation

# Panellists' Biographies

# **Mr Andrey BELOUSOV**

Andrey Belousov has been Head of the Multilateral Disarmament Division, Department for Non-Proliferation and Arms Control, of the Ministry of Foreign Affairs of the Russian Federation since 2013.

Mr Belousov deals with matters pertaining to the prevention of an arms race in outer space, BTWC, CCW, and UN multilateral disarmament machinery. He regularly participates as an expert in the work of Russian inter-agency delegations at various multilateral disarmament fora, and has been a permanent member of the Russian delegation in the UNGA First Committee since 2012.

From 2013 to 2015, Mr Belousov also participated in the open-ended consultations on the draft International Code of Conduct for Outer Space Activities, while from 2012 to 2013 he was a member of the Russian delegation that assisted the Russian governmental expert in the UN GGE on TCBMs.

Mr Belousov's prior diplomatic experience includes duties at both the Consulate General of the Russian Federation in San-Francisco, CA (2008-2012) and the Embassy of the Russian Federation in Washington, D.C. (2000-2004).

From 2004 to 2008, as well as from 1997 to 2000, Mr Belousov served on various posts in the Division for Military-Political Issues in Russia-U.S. Relations of the North America Department, Ministry of Foreign Affairs of the Russian Federation, where he dealt with nuclear disarmament and non-proliferation issues, as well as with strategic stability issues in the Russia-U.S. relations.

Mr Belousov holds a Master's Degree in International Relations from the Moscow State Institute for International Relations and a Master's Degree in Civil Law from the Moscow State Law Academy. In 1998, he participated in the IMET Program and completed a training course at the Naval Postgraduate School in Monterrey, California, USA.

#### Ms Rachita BHANDARI

Rachita Bhandari joined the Indian Foreign Service in 2005. She is currently serving as First Secretary (Disarmament) at the Permanent Mission of India to the Conference on Disarmament in Geneva.

Prior to this, she has served in the Permanent Mission of India to the UN in Geneva (2007-2011) and at the High Commission of India in London (2013-16). In New Delhi, she has served in the ASEAN Multilateral Division of the Ministry of External Affairs (2011-13).

#### Mr Duncan BLAKE

Duncan Blake transferred from the permanent Air Force to the Reserves in January 2017, after 22 years as a Legal Officer in the Royal Australian Air Force. He worked at the tactical, operational and strategic levels at home and on deployment overseas. He recently returned from the Middle East where he was providing legal support to aerial targeting operations in Iraq and Syria. He has worked with strike and fighter jet forces and units responsible for airspace surveillance. He has also been a prosecutor for the military. He served as the Deputy Director of Operations and International Law for the Australian Department of Defence, providing operations and international law advice and support at the highest levels within Defence and across government. More recently, Mr Blake was legal advisor to the Defence Space Coordinating Office and he chaired inter-departmental and international working groups in respect of strategic space law. His last posting, before transferring out of the permanent Air Force, was in a non-legal position, managing the development of a future joint operations concept for military use of outer space, to coordinate capability development and force structure decisions in the Australian Defence Force.

He has undergraduate degrees in Law and Economics from the University of Western Australia, a Master of Laws (LLM) degree from the University of Melbourne, and an LLM from McGill University. He is also a graduate of Australian Command and Staff College. His thesis topic for his LLM at McGill University was on the need for a 'Manual on International Law Applicable to Military Uses of Outer Space' (MILAMOS). Mr Blake is currently Deputy Editor-in-Chief for the MILAMOS Project (www.mcgill.ca/milamos), helping to lead a group of international experts to draft such a manual, aiming for publication in 2020.

Mr Blake has contributed extensively to doctrine and policy for the Australian Department of Defence and government as a whole, on issues of operations law and space law. Although this work is not publicly accessible, he has authored numerous articles, including an article for which he was awarded the 2011 Lieber Society Military Prize by the American Society of International Law.

#### Mr Bruno HANSES

Bruno Hanses, a German citizen, is an EU official since 1991 with extensive experience in the European Union's Common Foreign and Security Policy.

Mr Hanses' current position is Senior Expert "Non-Proliferation, Disarmament and Arms Exports Control" in the European External Action Service (EEAS) in Brussels.

His previous assignments include, among others, the posts of Head of Political Section in the EU Delegation in Kinshasa, DRC; Head of Section "Disarmament and Non-proliferation" in the EU Delegation in Geneva; and Head of Section "Planning and Operations" in EU civilian crisis management missions (Georgia, Aceh/Indonesia, Iraq, Kosovo).

# Dr David J.W. KENDALL

David Kendall is the current Chair of the United Nations Committee on the Peaceful Uses of Outer Space (UN COPUOS) for 2016-2017. During his career he has held senior positions with the Canadian Space Agency including as the Director General of Space Science and Technology. He is also a faculty member of the International Space University based in Strasbourg, France.

Born near London, England, Dr Kendall obtained his doctoral degree in Atmospheric Physics from the University of Calgary. After his Ph.D. he worked in private industry as an R&D scientist and then for the Canadian federal government, first with the National Research Council of Canada and later, with the newly created Canadian Space Agency.

Dr Kendall is an academician of the International Academy of Astronautics (IAA) and, during his career, has acted in various capacities on a number of national and international bodies, including the International Space University, the International Astronautical Federation, the Committee on Space Research (COSPAR), UN COPUOS, the European Space Agency, the Inter-Agency Space Debris Coordination Committee, the Group on Earth Observations, and the Natural Sciences and Engineering Research Council of Canada. He is a member of the Board of Advisors of SEDS Canada and recipient of the CASI 2017 C.D. Howe Award.

In 2002, Dr Kendall was awarded the Queen Elizabeth II Golden Jubilee Medal in recognition of his significant contributions and achievement to Canada.

# Ms Tanya KEUSEN

Tanya Keusen joined the United Nations Secretariat five years ago, through the National Competitive Exam process. During that time she has held positions with the Department of Field Support in New York and the Office for Outer Space Affairs in Vienna. In her current position with the Committee, Policy and Legal Affairs Section of the Office for Outer Space Affairs, she supports the work of the Committee on the Peaceful Uses of Outer Space and its Subcommittees. In this connection, she is the Secretary of both the Working Group on the Long-Term Sustainability of Outer Space Activities and the Action Team on Exploration and Innovation.

Prior to joining the United Nations, Tanya worked for the Government of Canada.

She holds a BA from the University of Victoria and a MA from the University of Essex.

#### Mr Hellmut LAGOS KOLLER

Hellmut Lagos has been the Chairman of the UN COPUOS Legal Subcommittee since 4 April 2016.

He studied Diplomacy at the Diplomatic Academy of Chile, Security and Defence at the National Academy for Political and Strategic Studies, and holds a Master's Degree in International Law and International Relations of the Ortega y Gasset Institute, Madrid.

Mr Lagos Koller joined the Ministry of Foreign Affairs of Chile in 1995 and has served as Alternate Representative to the Seabed Authority in Kingston, Jamaica (1999-2000), Alternate Representative to the International Organizations in Rome (2001-2004), Alternate Representative to the UN, IAEA and other International Organizations in Vienna, including UNOOSA (2005-2008), Program Director at the Asia Pacific Economic Cooperation (APEC) Secretariat in Singapore (2009-2010), Deputy Head for International Security in the Ministry of Foreign Affairs in Santiago (2011-2013), and Deputy Permanent Representative to the UN and other International Organizations, including UNOOSA in Vienna (2013-2016).

In 2012 he was appointed by the United Nations General Assembly in the United Nations Governmental Expert Group on Transparency and Confidence Building Measures in Outer Space Activities.

He has been delegate to a large number of international meetings and multilateral fora, including the United Nations First Committee, the IAEA Board of Governors, the Comprehensive Test Ban Treaty PrepCom, the International Conference on Cluster Munitions, the 2010 Review Conference PrepCom, the Oslo Conference on the Humanitarian Impact of the Use of Nuclear Weapons, the Arms Trade Treaty, and the Biological Weapons Convention, among others.

Mr Lagos Koller was the head of delegation of Chile in the process of consultations of the International Code of Contact for Outer Space Activities. He is actively involved in academic activities, and is a regular participant in the Wilton Park Conferences in the United Kingdom and in the Vienna Center for Disarmament and Non Proliferation (VCDNP), among others.

#### Mr Wei LIU

Wei Liu is a Division Director in the Department of Arms Control of the Ministry of Foreign Affairs of the People's Republic of China.

#### **Ms Vivian LOSS SANMARTIN**

Vivian Loss Sanmartin has been a career diplomat since 1994.

She has served in several diplomatic posts abroad, among which the Brazilian Permanent Delegation to the European Union in Brussels and the Brazilian Embassy in Buenos Aires, where she was the head of the energy section.

Since 2012, she has been the Minister Counsellor at the Brazilian Embassy in Vienna, as well as the Alternate Permanent Representative of the Brazilian Mission to the International Organizations in Vienna. She has regularly been heading the Brazilian delegations to COPUOS and its subsidiary bodies' meetings, and has participated in the negotiations of the Working Group on the Long-Term Sustainability of Outer Space Activities.

#### Mr Douglas L. LOVERRO

Douglas Loverro is a recognized and highly sought-after expert in defence and intelligence space matters, having worked for over 30 years in the US Department of Defense (DoD) and the National Reconnaissance Office (NRO) developing, managing, and establishing national policy for the full range of National Security space activities.

For the last four years, he served as the Deputy Assistant Secretary of Defense for Space Policy. In this role, he was responsible for establishing policy and guidance to assure United States and allied warfighters the benefits of space capabilities and to help guide the Department's strategy for addressing space-related issues. He led Departmental activities in international space cooperation, assessment of the national security impacts of commercial space activities, and oversaw the establishment of a strategy for addressing growing challenges in space security.

From 2007 to 2013, Mr Loverro served as the Executive Director and Deputy Program Executive Officer for the Air Force Space Command's Space and Missile Systems Center (SMC). In that capacity, he was responsible for the development, deployment, and sustainment of all Department of Air Force space systems and was a key spokesman for addressing the growing importance of space systems and the steps needed to assure them for the future. Prior to his assignment at SMC, he served in a wide range of space leadership roles as Deputy Director of System Engineering at the NRO, and Program Director for the Future Imagery Architecture System, the US Global Positioning Satellite (GPS) System, and the Air Force's classified space control systems program.

Mr Loverro is credited with a wide-ranging list of accomplishments in aerospace development including the development of a national strategy for space defense and space system resilience, initiating modernization of the third-generation GPS System, establishing the DoD's Global Broadcast Service program, and the invention of the supersonic chemical oxygen-iodine laser. He is an outspoken advocate for greater use of commercial capabilities and manufacturing for future DoD space and launch missions. He retired from active duty in the Air Force as a Colonel in February 2006 after 30 years of uniformed service and upon selection as a member of the Defense Intelligence Senior Executive Service.

Mr Loverro holds an M.S. in Physics from the University of New Mexico, an M.S. in Political Science from Auburn University, an M.B.A. from the University of West Florida, and a B.S. in Chemistry from the United States Air Force Academy. He was the top graduate from his class at the Industrial College of the Armed Forces and is a graduate of the JFK School of Government Senior Executives in National and International Security Program, and the National Defense University's Pinnacle Program.

Mr Loverro is married to Stephanie Loverro and they have two children, Adam and Kari. He is an avid triathlete and is in competition with his daughter, who is winning.

# Prof. Tanja MASSON-ZWAAN

Tanja Masson-Zwaan is Assistant Professor and Deputy Director of the International Institute of Air and Space Law at Leiden University.

From 2007 to 2016, she was the elected President of the International Institute of Space Law (IISL). In 2016 she was elected President Emerita.

Tanja advises various bodies on space law issues, teaches and supervises students at Bachelors, Masters and PhD level, carries out research and publishes on a broad range of space law topics.

She is an elected member of various professional associations, such as the International Academy of Astronautics and the International Law Association, and serves as advisor to several organizations including Secure World Foundation and Mars One. She also was a Member of the Founding Board of Women in Aerospace-Europe.

## Ambassador (Ret.) Paul MEYER

Paul Meyer is a Senior Fellow at The Simons Foundation Canada and an Adjunct Professor of International Studies at Simon Fraser University both in Vancouver, Canada.

A former Canadian career diplomat, he served over 35 years in a variety of assignments, primarily in the field of international security policy. Amongst these he was Director-General of the International Security Bureau (1998-2001), Ambassador and Permanent Representative to the UN and Conference on Disarmament in Geneva (2003-2007), and Director-General of the Security & Intelligence Bureau, DFAIT (2007-2010).

He is a member of the Governance Group of "Space Security Index", an annual publication that surveys developments in outer space with implications for security, and his research and writing interests include, besides space security, the nuclear non-proliferation and disarmament regime and international cyber security.

#### Mr Nobu OKADA

Nobu Okada founded ASTROSCALE PTE. LTD. in Singapore in 2013 due to a strong desire to address the growing threat of space debris. He used his personal funds as seed money and hired a team in Singapore and Tokyo while raising capital for the business. The team calls themselves "Space Sweepers", and their mission is to secure space flight safety by incubating space debris removal technologies.

Mr Okada serves as a member of the Subcommittee on Space Civil Use and Space Industry at the Cabinet Office for the Government of Japan, and is also a member of The Future of Space Technologies Council, World Economic Forum, and International Astronautical Federation.

Prior to ASTROSCALE, Mr Okada was a Japanese IT entrepreneur and strategy consultant, and had managed IT companies in Japan, China, India and Singapore. He led one company to a successful IPO. Before joining the IT industry, he worked for McKinsey & Company, and the Japanese Government in the Ministry of Finance.

Mr Okada earned his Bachelor's Degree in Genetics from the University of Tokyo in 1995 and an MBA from the Krannert School of Business, Purdue University in 2001. When he was a teenager, Mr Okada attended a camp at NASA's Marshall Space Flight Center in the United States where he met Japan's first astronaut, Mr Mamoru Mohri. He received the handwritten message, "Space is where you will thrive.", and he has been inspired to work on space ever since.

## **Dr Xavier PASCO**

Xavier Pasco (Doctor in Political Science – University of Paris-Sorbonne) is Director of the *Fondation* pour la Recherche Stratégique (FRS – Foundation for Strategic Research), an independent think-tank based in Paris.

Before that, Dr Pasco was Senior Research Fellow, in charge of the programme "Space, High technology and security". Previous to 1997, he was researcher at CREST (Center for Research and Evaluation of the relationships between Strategies and Technology) associated to the Ecole Polytechnique, France, where he started his career in 1988.

Dr Pasco has conducted and been involved in a number of projects investigating the use of space for security, notably in support of the French ministry of defense but also in relation to the European Union R&D Framework Programme (coordinated by the European Commission), as well as of other international organizations. He has also been part of numerous working groups related to national and European space policy.

In the European domain, Dr Pasco has supported several analytical works of the Subcommittee on Security and Defence of the European Parliament, and contributed to EDA and ESA on-going work on governance and data policy issues for future programmes. In particular, he has been in charge of the ESA-commissioned study related to governance and data policy models suitable for a European Space Situational Awareness System. He has also been in charge of a European mandated study about the governance and data policies related to the development of the ground segment of the future European military observation systems. In his capacity as policy external adviser for the Joint Space Command and the General Direction of the International Relations and Strategy of the French MoD, Dr Pasco

has recently been focusing on the legal and policy issues related to the development of an international security framework for the use of space systems with a view to promoting transparency and confidence building measures and to mitigating risks and threats in space. He has also worked on the legal and policy aspects of electromagnetic interference related issues in collaboration with key commercial telecommunication satellite operators.

Dr Pasco is also an associate Research Fellow at the Space Policy Institute in the George Washington University (Washington D.C., U.S.A.). He has also been giving lectures in the French Military School in Paris as well as at the Institute of Political Studies in Paris. He is the Deputy Editor of the international academic review Space Policy. He has also been named Expert at the European Economic and Social Committee in Brussels in 2007. In 2012, Xavier Pasco has been elected full member of the International Academy of Astronautics.

He has published numerous works (books, more than 100 articles or papers) on space and security topics.

#### Mr Massimo PELLEGRINO

Massimo Pellegrino is the researcher and point of contact on space security matters at the United Nations Institute for Disarmament Research (UNIDIR). His research mainly focuses on the relationships between outer space security, strategic stability, and arms control.

Prior to joining UNIDIR, Mr Pellegrino worked as policy analyst and project manager at the European Union Institute for Security Studies (EUISS), where he both coordinated the Institute's research efforts in the field of space and security, and led an inter-institutional Task Force with a view to informing the EU policy making in this domain.

From 2009 to 2014, he worked in different capacities at the European Space Agency (ESA), European GNSS Agency (GSA), European Commission, Italian Ministry of Foreign Affairs, and in the Industry.

Mr Pellegrino has been a speaker and moderator at several conferences and workshops on space and security issues, notably at the International Astronautical Congress (IAC), European Interparliamentary Space Conference (EISC), European External Action Service (EEAS), EUISS, ESA, and Chatham House. He was also a delegate at the 53<sup>rd</sup> session of the Scientific and Technical Sub-Committee of the UN COPUOS.

Mr Pellegrino has been a member of the American Institute of Aeronautics and Astronautics (AIAA), the Institute of Electrical and Electronics Engineers (IEEE), and other professional associations committed to advancing technological innovation and excellence.

Mr Pellegrino received a Master's Degree in Space Studies from the International Space University (ISU), as well as a Master's Degree in Economics, and a Master's and a Bachelor's Degree in Industrial Engineering from the University of Naples Federico II.

# Ms Elizabeth QUINTANA

Elizabeth Quintana is a Senior Research Fellow, Futures and Technology, at the Royal United Services Institute (RUSI), looking at the doctrinal, strategic and ethical implications of emerging technologies and how they will impact on defence and security and indeed wider society.

She has a particular interest in the emergence of Space as a Domain and 'New Space' actors; in the use of unmanned technology and robotics; 3D and 4D printing, and in the use of artificial intelligence and analytics. These interests feed into broader research themes of: governance and security in an age of social media; the social and security implications of truly global interconnectivity and work, stability & security in volatile world. She is responsible for conducting research, writing articles, and organising events related to these topics.

Elizabeth has held a variety of posts while at RUSI most latterly running the Military Sciences team. Prior to that she was Senior Research Fellow for Air Power & Technology, Programme Head, Acquisition and Programme Head C4ISR. Elizabeth retains a strong interest in international defence matters and how trends in the security sector intersect with or affect broader social trends.

Before joining RUSI, Elizabeth worked for two years running technical conferences for the international defence community. In 2001 she took a graduate assistant position at the University of

Texas A&M where she worked for two years on a DARPA project investigating collaborative robotics.

Elizabeth holds an MEng in Automatic Control and Systems Engineering from the University of Sheffield and an MSc in Aerospace Engineering from the University of Texas A&M.

# Dr Rajeswari Pillai RAJAGOPALAN

Rajeswari Pillai Rajagopalan is Senior Fellow and Head of the Nuclear and Space Policy Initiative at the Observer Research Foundation (ORF), New Delhi.

Dr Rajagopalan joined ORF after a five-year stint at the National Security Council Secretariat (2003-2007), where she was an Assistant Director. Prior to joining the NSCS, she was Research Officer at the Institute of Defence Studies and Analyses, New Delhi.

She is the author of five books: Locating India within the Global Non-Proliferation Architecture: Prospects, Challenges and Opportunities (2016); Nuclear Security in India (2015); Clashing Titans: Military Strategy and Insecurity Among Asian Great Powers (2012); The Dragon's Fire: Chinese Military Strategy and Its Implications for Asia (2009). She has also co-authored and edited five other books, including "Space India 2.0: Commerce, policy, security and governance perspectives" (2017).

Her research articles have appeared in edited volumes and in peer reviewed journals, such as India Review, Strategic Studies Quarterly, Air and Space Power Journal, International Journal of Nuclear Law, Strategic Analysis and CLAWS Journal.

She has also been invited to speak at international fora including the UN COPUOS (Vienna), Conference on Disarmament (Geneva), UNIDIR (Geneva), ASEAN Regional Forum (ARF) and the European Union.

#### Ms Victoria SAMSON

Victoria Samson is the Washington Office Director for Secure World Foundation and has nearly twenty years of experience in military space and security issues.

Before joining SWF, Ms Samson served as a Senior Analyst for the Center for Defense Information (CDI), where she leveraged her expertise in missile defence, nuclear reductions, and space security issues to conduct in-depth analysis and media commentary. Prior to her time at CDI, Ms Samson was the Senior Policy Associate at the Coalition to Reduce Nuclear Dangers, a consortium of arms control groups in the Washington, D.C. area, where she worked with Congressional staffers, members of the media, embassy officials, citizens, and think-tanks on issues surrounding dealing with national missile defense and nuclear weapons reductions. Before that, she was a researcher at Riverside Research Institute, where she worked on war-gaming scenarios for the Missile Defense Agency's Directorate of Intelligence.

Known throughout the space and security arena as a thought leader on policy and budgetary issues, Ms Samson is often interviewed by multinational media outlets, including the New York Times, Space News, and NPR. She is also a prolific author of numerous op-eds, analytical pieces, journal articles, and updates on missile defence and space security matters.

Ms Samson holds a Bachelor of Arts (B.A.) degree in political science with a specialization in international relations from UCLA and a Master of Arts (M.A.) in international relations from the Johns Hopkins School of Advanced International Studies.

#### Mr Jarmo SAREVA

Jarmo Sareva of Finland was appointed as Director of the United Nations Institute for Disarmament Research (UNIDIR) effective 1 January 2015.

Mr Sareva brings to the Institute a wealth of experience from United Nations and disarmament affairs. Until the end of 2014 he served as Deputy Secretary-General of the Conference on Disarmament and Director of the Conference on Disarmament Secretariat and Conference Support Branch (Geneva Branch) of the UN Office for Disarmament Affairs, which post he had held since September 2009.

From 2006 to 2009 Mr Sareva served as Chief of the Disarmament and Peace Affairs Branch at the Department for General Assembly and Conference Management (DGACM) of the UN Secretariat in New York, and as Secretary of the First Committee (Disarmament and International Security) of the General Assembly. Prior to joining DGACM, Mr Sareva was Ambassador and Deputy Permanent Representative of Finland to the UN in New York, during which time he served, inter alia, as Chairman of the First Committee. Mr Sareva served as Special Assistant to the Executive Chairman of the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC), a subsidiary organ of the UN Security Council, from 2001 to 2002.

From 2000 to 2001, Mr Sareva was Chef de Cabinet of the Office of the President of the 55<sup>th</sup> session of the United Nations General Assembly (Millennium Assembly). During that time, he guided the work of the Cabinet during a record number of major conferences and special sessions of UNGA, including the UN Conference on the Illicit Trade in Small Arms and Light Weapons. The Presidency was widely appreciated for successfully integrating the various UN conferences during that year under the general theme of follow-up to the September 2000 Millennium Summit.

From 1998 to 2000, Mr Sareva served as Minister Counsellor at the Permanent Mission of Finland to the United Nations in New York. He represented the European Union in the Fifth Committee during the Finnish Presidency of the EU (1999), acting as chief negotiator for the EU during the budget negotiations for the 2000-01 biennium.

Mr Sareva's prior diplomatic experience includes two tours of duty at the Embassy of Finland in Moscow, including as Deputy Chief of Mission from 1996 to 1998. He has also served as Director of Disarmament, Arms Control and Non-proliferation at the Ministry for Foreign Affairs in Helsinki, as First Secretary at the Finnish Embassy in Washington, D.C., and as Counsellor at the Finnish Mission to the CSCE (now OSCE) in Vienna.

Mr Sareva holds an M.A. from the School of Advanced International Studies of the Johns Hopkins University in Washington, D.C., and an M.Sc. (Political science) from the University of Turku in Finland. From 1989 to 1990, he spent an academic year in postgraduate training on leave from MFA at the Graduate Institute of International Studies in Geneva.

# Dr Rogel Mari SESE

Rogel Mari Sese was the program leader of the National SPACE Development Program under the Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD) of the Department of Science and Technology (DOST).

He is the foremost space expert in the Philippines and key person in developing the Philippine Space Program. He was instrumental in the filing of House Bills and Senate Bills pushing for the legislation of the Philippine Space Development and Utilization Policy and creation of the Philippine Space Agency.

He also serves as the focal person for the Philippine Space Science Education Program (PSSEP) of the Science Education Institute (SEI) of the DOST, as well as numerous international space collaborations and organizations.

## Dr Michael K. SIMPSON

Michael Simpson is Executive Director of the Secure World Foundation and former President of the International Space University.

Dr Simpson's academic career extends over 36 years and 5 continents. In addition to his tenure at ISU, he has been President of Utica College and the American University of Paris with a combined total of 22 years of experience as an academic chief executive officer.

He currently holds a post as Professor of Space Policy and International Law at ISU. He is a member of the International Academy of Astronautics, a member of the International Institute of Space Law, and a Senior Fellow of the International Institute of Space Commerce.

His practical experience includes service as an observer representative to both the UN Committee on the Peaceful Uses of Outer Space and the Group on Earth Observations, and a member of both the Executive Committee and Board of Directors of the World Space Week Association, and the Board of Governors of the National Space Society in the USA. He is a founding Trustee of Singularity University and chairs the "Ten-to-the-Ninth Plus" Foundation.

# Dr Olga VOLYNSKAYA

Olga Volynskaya is Chief International Law Counsel of ROSCOSMOS and Research Scientist of the Russian Foreign Trade Academy (VAVT, Moscow).

She holds an LL.M in EU Law and a Ph.D. in Space Law, and is permanent member of the Russian delegation to the UN COPUOS, its Scientific, and Technical and Legal Subcommittees.

Dr Volynskaya is also a visiting professor of the People's Friendship University of Russia (RUDN, Moscow) and Moscow State Institute of International Relations (MGIMO, Moscow).

She is author of a study course on the "Fundamentals of international space law" in RUDN, and co-author of a specialized course on the "European and Eurasian space law" in MGIMO. She also authored 32 scientific publications in the leading Russian and foreign journals on international law and foreign trade, and co-authored 8 books on space law, inter alia the Russian textbook "International Space Law" edited by G.P. Zhukov. She is also a member of the Tsiolkovsky Russian Academy of Cosmonautics and the International Institute of Space Law.

#### **Dr Nathan WEISS**

Nathan Weiss received his B.Sc. in Mathematics and Physics from the University of Toronto and his Ph.D. in Physics from McGill University.

Following post-doctoral positions at the Stanford Linear Accelerator Center and the University of Illinois at Urbana-Champaign, Dr Weiss joined the faculty of the Department of Physics and Astronomy at the University of British Columbia in Vancouver, Canada where he pursued an active academic research and teaching career.

In 2001 Dr Weiss joined Israel Aerospace Industries where he has led several high profile Research and Development programs including IAI's participation in both an Israeli and a European R&D consortium in the field of Aviation Security.

Dr Weiss is currently a Senior Scientist in the Cyber Division at IAI. His activities include Advanced Cyber Defence for Aviation and Space Systems, and he is a leader in IAI's participation in a Horizon 2020 consortium on Social Engineering in Cyber Security.

## Ms Joanne WHEELER, MBE

Joanne Wheeler is a partner in Bird&Bird's Tech and Comms Group, in London. She specialises in communications, satellite, and space regulatory and policy matters together with commercial contracts and PPPs. She is one of the leading practitioners in the field of satellites, having worked at both the European Space Agency and Ofcom, giving her an unparalleled understanding of the challenges facing the sector.

In January 2017, Joanne was awarded an MBE for her services to the space industry. She was named in the 2013 "Hot 100 Lawyers" for her work with the UK industry and Government's Innovation and Growth Strategy and for setting up the Satellite Finance Network, which she continues to co-chair and run. She won the individual Financial Times European Legal Innovator of the Year Award in 2014, and was shortlisted for lawyer of the year in 2017.

She is an elected Fellow of the Royal Astronomical Society and a member of the International Institute of Space Law.

#### Mr Li ZHANG

Li Zhang is a Second Secretary of the Ministry of Foreign Affairs of China. His work focuses on Outer Space Security. He holds a Master's Degree of International Law from the China Foreign Affairs University.