UNIVERSITY OF SURREY

MISSION SUSTAINABLE: ENSURING EARTH-SPACE HUMAN ACTIVITIES ARE SUSTAINABLE BY DEFAULT

WORKSHOP PROGRAMME

21 May 2025

OUR SPONSORS

CENTRE FOR THE STUDY OF GLOBAL POWER COMPETITION
UNIVERSITY OF SURREY

The Centre for the Study of Global Power Competition (CGPC) brings together multi-disciplinary perspectives to study the dynamics of contemporary inter-state competition.

surrey.ac.uk/centre-study-global-power-competition

IAS Institute of Advanced Studies
20TH ANNIVERSARY

The Institute of Advanced Studies (IAS) at the University of Surrey sponsors workshops and Fellowships at the 'cutting edge' of science, engineering, social science and the humanities. Through this scheme the Institute fosters interdisciplinary collaborations and encourages a flow of international scholars to visit, enjoy their stay at Surrey and leave behind excellent ideas and innovations.

ias.surrey.ac.uk

SURREY LAW SCHOOL
UNIVERSITY OF SURREY

Enjoying excellent links with local, national and international legal communities, Surrey Law School has particular expertise in environmental law, legal philosophy, corporate and commercial law, anti-corruption law, criminal law, public law, European law and international law.

surrey.ac.uk/school-law

SURREY SPACE CENTRE

The Surrey Space Centre is a world leading Centre of Excellence in Space Engineering. Their mission is to create and disseminate knowledge that leads and underpins the progress of space engineering and its applications in the space sector, and to maintain their leadership in cost effective space engineering

surrey.ac.uk/surrey-space-centre

SPACE SOUTH CENTRAL

Space South Central is the largest regional space cluster in the UK. They are a partnership between industry and academia, designed to accelerate space business growth, foster an environment of innovation, grow the reputation of the south-central region and contribute to national prosperity.

spacesouthcentral.com

The Surrey Centre for International and Environmental Law (SCIEL)

The Surrey Centre for International and Environmental Law (SCIEL) serves as a base for interdisciplinary research on international and environmental law and policy.

surrey.ac.uk/surrey-centre-international-and-environmental-law

WELCOME AND INTRODUCTION

We are delighted to welcome all participants to Surrey Space Centre, University of Surrey for our workshop 'Mission Sustainable: Ensuring Earth-Space Human Activities are Sustainable by Default'.

Space has become an essential part of life on Earth. From climate monitoring and disaster response to navigation, agriculture, and global communications, space-based systems play a vital role in managing many of the most complex global challenges of our time. However, as the scale and intensity of human activity in space increases, so too does the urgency of ensuring that this activity is sustainable—environmentally, economically, socially, and politically.

Space is no longer a domain reserved for a handful of nation-states. The past decade has seen an explosion of commercial actors, small satellite operators, and new national space programmes. While this diversification brings innovation, it also adds complexity—and significant risk. The proliferation of mega-constellations, the potential for resource extraction from celestial bodies, and growing congestion in low Earth orbit raise critical concerns about long-term orbital sustainability, launch and atmospheric pollution, and the governance of shared space resources.

The environmental footprint of space activity is no longer theoretical. Orbital and re-entry debris, the carbon impact of frequent launches, and the unregulated nature of potential lunar and asteroid resource exploitation present increasing risks to the fragile Earth-space ecosystem.

In response to these growing concerns, a number of international and regional initiatives have laid important groundwork for sustainable space governance:

- The United Nations Office for Outer Space Affairs (UNOOSA) released the Guidelines for the Long-term Sustainability of Outer Space Activities (2021), developed through the Committee on the Peaceful Uses of Outer Space. These guidelines offer a voluntary framework for safe, transparent, and cooperative space activity.
- The Earth Space Sustainability Initiative (ESSI) launched its Memorandum of Principles in 2023, articulating a shared global commitment to sustainable and responsible space operations grounded in principles of environmental stewardship, equity, and inclusivity.
- The European Space Agency (ESA) is a key leader in the field, advancing both technology and policy through its Space Safety Programme, the upcoming ClearSpace-1 active debris removal mission, and the Zero Debris Charter (2023)—which invites governments, agencies, and industry to design missions with minimal or no debris creation by default by 2030.
- The European Union is preparing a comprehensive EU Space Law (Space Act), expected to harmonize space regulation across member states in line with the EU Treatises, including the environmental integration principle and sustainable development. This legislation is anticipated to include sustainability as a central pillar, focusing on transparency, space traffic management, and the accountability of commercial operators.
- The UK's National Space Strategy (2024) and the UK Space Agency's commitments to sustainability include regulatory support for sustainable satellite operations, space environment.

These are important and welcome steps—but they are only the beginning. Real progress demands more than voluntary guidelines; it requires systemic change, global governance innovation, and integration across disciplines, sectors, and jurisdictions.

This workshop aims to take that next step. By bringing together experts in space science and engineering, law and policy, finance and economics, international relations, and environmental ethics, we aim to explore how earth-space activities can become sustainable by default.

This workshop is designed to foster interdisciplinary collaboration and support a holistic systems-thinking approach to problem-solving. Only by working across boundaries—disciplinary, national, and generational—can we create a space future that is both ambitious and responsible.

Thank you for being part of this collaborative workshop. We look forward to a day of sharing expertise, knowledge, and ideas as we work together to ensure that space remains open, safe, and sustainable—by default, and for all—into the future.

Dr Feja Lesniewska
Senior Lecturer in Sustainable Transitions and Environmental Law, Co-Director Surrey Centre for International and Environmental Law, Surrey Law School.

Continued ▶

ACKNOWLEDGEMENTS

Like all workshops a great deal of time and effort is spent by a number of people to make the event possible. I wish to say a huge thank you to the following: Mirela Dumic and Louise Jones (IAS) for guiding me through the process of delivering a workshop drawing on their extensive experience, Dan Smith, (Space South Central), for helping identify and contacting people for the panel, Dr Lucía F. de la Bella, (Surrey Space Centre), for constant support, making links with the Surrey space community and helping with organising the logistics for the day, Theo Donnelly, (School of Social Science) for kindly taking on extra administrative work, Dr Matthew Peacock (Governing Plastics Network, Surrey Law School) who went beyond the call of duty to ensure all aspects of the workshop were delivered, and finally Professor Keith Ryden (Interim Director of the Surrey Space Centre) for making Surrey Space Centre available for the workshop.

Workshop Chair:
Dr Feja Lesniewska, Senior Lecturer in Sustainable Transitions and Environmental Law, University of Surrey

Organising committee:
Associate Professor Joshua Andresen, Director, Centre for the Study of Global Power Competition (CGPC), University of Surrey

Dr Lucía F. de la Bella, Faculty of Engineering and Physical Sciences, Surrey Space Centre.

Professor Rosalind Malcolm, Co-director, Surrey Centre for International and Environmental Law (SCIEL), University of Surrey

Professor Keith Ryden Head of Surrey Space Centre, University of Surrey

Dan Smith, Space South Central, University of Portsmouth

Administrative support:
Theo Donnelly, School of Social Sciences, University of Surrey

Mirela Dumic and Louise Jones, Institute of Advanced Studies

Dr Matthew Peacock, Surrey Law School, University of Surrey

PROGRAMME

WEDNESDAY 21 MAY
SSC Meeting Room, 13/15 BA 01

(BST)

09.00 – 09.30	Registration and Coffee
	PART 1
09.30 – 09.40	Welcome – Professor Adam Amara, Chief Scientist, UK Space Agency & Professor of Cosmology, University of Surrey
09.40 – 09.50	**Keynote Speaker 1**: Joanne Wheeler MBE, Director, Earth Space Sustainability Initiative *'The Challenge of Achieving Space Sustainability by Default'*
09.50 – 10.30	**Panel 1**: *'Space Science, Technology and Sustainability'* Chair – Adam Amara, Chief Scientist, UK Space Agency & Professor of Cosmology, University of Surrey
10.30 – 11.15	**Panel 2**: *'Law – The Problem and Potential Solutions'* Chair - Dr Feja Lesniewska, Senior Lecturer in Sustainable Transitions and Environmental Law, Surrey Law School, University of Surrey
11.15 – 11.45	Break
11.45 – 12.45	Breakout Groups, Feedback and Discussion
12.45 – 13.45	Lunch Including Group Photo and Surrey Space Centre Tour
	PART 1
13.45 – 13.55	**Keynote Speaker 2**: Aarti Holla-Maini, Director of the UN Office for Outer Space Affairs *A specially recorded video message*

Continued ▶

13.55 – 14.05	**Keynote Speaker 3**: Dr Colin Baldwin, Executive Director, UK Space
14.05 – 14.45	**Panel 3**: *'Sustainable Space Finance – Innovation, Investment and Insurance'* Chair – Professor Emma Edhem, Chairman Open UK Space Advisory Board
14.45 – 15.30	**Panel 4**: *'Space Sustainability – Diplomacy and Security'* Chair - Dr Joshua Andresen, *Associate Professor of National Security and Foreign Relations Law, Surrey Law School*
15.30 – 15.45	Break
15.45 – 16.45	Breakout Groups, Feedback and Discussion
16.45 – 17.00	Closing Remarks and Next Steps

PANELS

Panel 1: Space Science, Technology and Sustainability

Chair – Adam Amara, Chief Scientist, UK Space Agency & Professor of Cosmology, University of Surrey

Panel 1 will focus on the scientific and technical challenges—as well as potential solutions—necessary to ensure that human space activities are sustainable by design. This panel will explore a range of critical themes including the environmental impacts of satellite constellations, mitigation of atmospheric and orbital pollution, and the full lifecycle of materials used in space systems, from production to end-of-life disposal or repurposing. It will also consider the sustainable extraction and use of lunar and asteroid resources, highlighting the engineering innovations and systems thinking required to reduce waste, preserve space environments, and minimize the carbon and resource footprint of space missions. Drawing from fields such as green engineering, closed-loop life support systems, and in-situ resource utilization (ISRU), the discussion will emphasize how science and engineering must work together to embed sustainability at every stage of space exploration and development.

- Gary Cannon – Space Segment Lead, Satellite Applications Catapult
- Dr Sungwoo Lim - Senior Lecturer in Space Applications, Exploration and Instrumentation, Surrey Space Centre, University of Surrey
- Mitch Hunter-Scullion – CEO and Founder, Asteroid Mining Corporation
- Dr Adam Mitchell – Climate and Sustainability Engineer, Directorate of Strategy, Legal and External Affairs, European Space Agency
- Dr Andrew Wilson – Lecturer in Environmental Management, Glasgow Caledonian University [online]

Panel 2: Law – The Problem and Potential Solutions

Chair - Dr Feja Lesniewska, Senior Lecturer in Sustainable Transitions and Environmental Law, Surrey Law School, University of Surrey

Panel 2 will explore the legal foundations necessary to ensure the long-term sustainability of space activities. It will examine how current and emerging legislative and regulatory frameworks can support responsible behaviour in orbit and beyond. Key themes include international and EU space law, space traffic management, and the development of a circular space economy—all considered through the lens of sustainability. The panel will also address critical issues such as liability for space debris, the governance of space resource utilization, the regulation of private sector actors, intellectual property rights in space-based innovation, and the role of law in promoting transparency, accountability, and environmental stewardship in human space activities.

- Efrén Díaz Díaz – Secretary General of the Spanish Association of Aeronautical and Space Law
- Dr Berna Akcali Gur – Centre for Commercial Law Studies Queen Mary, University of London

Continued ►

- Dr Michael Picard – Lecturer in International Environmental Law, Edinburgh Law School, University of Edinburgh
- Dr Phil Merchant – UK and European patent attorney at Marks & Clerk LLP

Panel 3: Sustainable Space Finance – Innovation, Investment and Insurance

Chair – Professor Emma Edhem, Chairman Open UK Space Advisory Board Panel 1: Space Science, Technology and Sustainability

Panel 3 will focus on how financial and fiscal instruments can be used to promote sustainable space innovation and business, from the lab to commercial scale. The panel will address several themes, including innovation, entrepreneurship, and commercialisation—ranging from small-scale startups to large-scale industry—and will consider the role of insurance in steering the market toward greater sustainability. It will also discuss the changing investment landscape, including the rise of private funding and the increasing commercialisation of space activities.

- Dr Chris Hobbs, Enterprise Expert in Residence, SETsquared Surrey, University of Surrey
- Professor Matt Angling, Head of Research and Innovation, Digital Intelligence Space Business Unit, BAE systems
- Chris Newlands, CEO and founder, Space Aye
- Neil Stevens, Head of Space, Price Forbes

Panel 4: Space Sustainability – Diplomacy and Security

Chair - Dr Joshua Andresen, Associate Professor of National Security and Foreign Relations Law, Surrey Law School

Panel 4 will focus on space security issues, particularly those related to cybersecurity and the functionality of critical infrastructure. It will address challenges posed by external threats, including hostile nations, as well as questions surrounding the increasing weaponization of space, competition over the appropriation and extraction of materials from asteroids and other celestial bodies, and the growing reliance on private actors. The discussion will explore what these developments mean for ongoing diplomatic efforts to advance space sustainability through both state and non-state institutions

- Dr Fabio Tronchetti, Associate Professor, School of Law, University of Northumbria
- Dr Nikita Sze Wai Chiu, Associate Professor in Space Innovation and Technology Governance, University of Durham
- Ian Christensen, Senior Director, Private Sector Programs, Secure World Foundation (online)
- Dr Joanna Kulesza, Executive Director, Lodz Cyber Hub, University of Lodz
- Dr Sharon Lemac Vincere, Interdisciplinary Academic, Hunter Centre of Entrepreneurship, Strathclyde University Business School

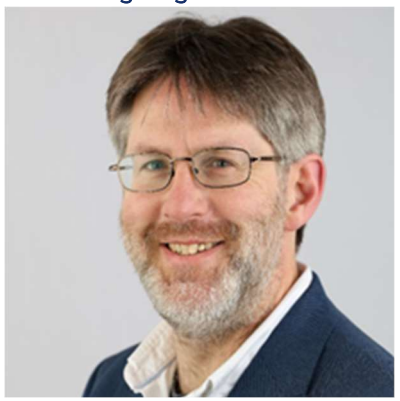
PARTICIPANTS

Adam Amara

Chief Scientist, UK Space Agency

Adam Amara is Professor of Cosmology at the University of Surrey and Chief Scientist at the UK Space Agency. His research explores the fundamental nature of the Universe, with particular focus on dark energy, dark matter and cosmology. He has made major contributions to a range of large international science missions, combining academic expertise with industry collaboration. At the UK Space Agency, he helps shape the scientific direction of national space activities and supports efforts to strengthen the UK's position in the global space sector. Alongside his research and advisory roles, he is passionate about building partnerships across academia, industry and government to advance space science, drive innovation and grow the UK space economy.

Matt Angling



Head of Research and Innovation, BAE Systems Digital Intelligence Space Business Unit

Matthew Angling is the Head of Research and Innovation at the BAE Systems Digital Intelligence Space Business Unit and a visiting Professor at the University of Surrey. He has been active in space technology, space weather and space situational awareness research and development for over 25 years. Before joining BAE, Matthew was the Director of space weather for Spire Global and, prior to that, the Royal Academy of Engineering, and Defence Science and Technology Laboratory, Professor in the Space Environment at the University of Birmingham. In that role he led the development of next generation space weather models and built capability in other space topics related to the vulnerability of satellite systems such as space traffic control and satellite drag. Matthew has also held the

Continued ►

role of QinetiQ Fellow when he led the QinetiQ space weather team that specialised in the detection, mitigation and exploitation of space weather effects.

Colin Baldwin

Executive Director, UK Space

Colin took up the role of Executive Director of UK Space – the industry-led trade association for the UK's space sector – in July 2024, having joined as Head of Policy in June 2022. UK Space helps its members to connect to each other and key stakeholders, promotes its members and the space sector and develops industry positions to ensure space remains at the forefront of Government policy. UKspace has over 220 members of all sizes across the entire space value chain and across the whole of the UK. Prior to this Colin was Head of Local Growth Strategy at the UK Space Agency, with responsibility for developing space clusters across the country, fostering university-business collaborations and developing initiatives to support space start-ups and scale-ups. Whilst at the UK Space Agency, he also co-led work to understand and mitigate the impacts of Covid on the space sector and led the UK Space Agency's Interim Strategy Team - working across Government to support the establishment of the new National Space Council and initiate work on the National Space Strategy. Earlier in his career, Colin was involved in establishing the International Space Innovation Centre and Satellite Applications Catapult.

Gary Cannon

Space Segment Lead, Satellite Applications Catapult

Gary has over 20 years' experience in the space sector having worked for private & public, defence & commercial, large & small companies, often working with international partners and has delivered 32 spacecraft into orbit, including the RapidEye hyperspectral constellation and the Galileo GNSS spacecraft. He is an expert in spacecraft lifecycles, systems and designing for the space environment and has experience in space policy, regulation, innovation, mission concepts, assembly integration and test, bids and business development. He is also involved in developments around Space Domain Awareness (SDA), Remote Proximity Operations (RPO) and In Orbit Servicing, Assembly and Manufacturing (ISAM).
In his current role as Space Segment Lead at the Satellite Applications Catapult, Gary plays a leading role in convening industry, academia and government to drive forward technical innovation and sustainable practices in space. He also advises on mission architectures that prioritise longevity, adaptability, and responsible end-of-life solutions.
Gary works to align engineering practice with emerging standards and regulatory frameworks, ensuring that new missions can coexist with the long-term health of the orbital environment. His work reflects a commitment to future-proofing the space sector, promoting not just access to space, but stewardship of it.

Continued ▶

Sze Wai Nikita Chiu

Associate Professor in Space Innovation and Technology Governance, Durham

Dr Nikita Chiu is Associate Professor in Space Innovation and Technology Governance at Durham University Business School and the Durham Space Research Centre. She is also Ad Astra Distinguished Fellow in Robotic and Outer Space Governance at the Space Engineering Research Center, based at USC. A former Ernst Mach grant recipient, she previously served as Senior Lecturer in Innovation Policy at the University of Exeter, and as Research Fellow in Robotics and Outer Space Technologies at the Department of Politics and International Relations at the University of Oxford. Dr. Chiu had conducted research in Hong Kong, Tallinn, Dublin, Heidelberg, Geneva, and Vienna. She read Technology Policy at the University of Cambridge and gained her PhD from the Graduate Institute of International Studies in Geneva in 2014.
Dr Chiu was selected as one of "20 under 35" future leaders to watch by the Space

Continued ▶

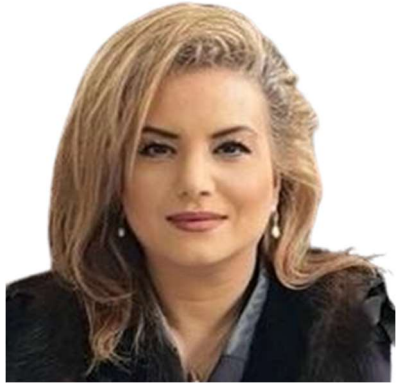
& Satellite Professionals International in 2019 for her work on space sustainability. She has been invited to speak at the Royal Society by the French Embassy in the UK alongside experts from Airbus and had spoken at the Pontifical Academy of Social Sciences at Vatican City.

Ian Christensen

Senior Director, Private Sector Programs, SWF

Ian Christensen is Senior Director, Private Sector Programs at Secure World Foundation (SWF), a non-profit organization promoting the secure, sustainable and peaceful uses of outer space contributing to global stability and benefits on Earth. He is responsible for leading SWF's engagement activities with the commercial space industry, where his activities focus on policy and governance topics in support of the development of private sector space capabilities: including topics such as space debris mitigation, norms of behaviour for responsible space operations, and space resources policy. Mr Christensen was a member of the Hague International Space Resources Governance Working Group, where he chaired the Group's Socioeconomic Panel. He also served as a member of the Secretariat for the Consortium for Execution of Rendezvous and Servicing Operations (CONFERS), an industry group developing best practices and standards for commercial satellite servicing. Mr. Christensen holds a Master of Arts (M.A.) in international science and technology policy, focusing on space policy from the George Washington University Elliott School for International Affairs.

Emma Edhem



Chairman Open UK Space Advisory Board

Emma is an Alderman of the City of London Corporation, Chairman of Open UK Space Advisory Board, and member of the Strategic Advisory Board of Space Aye, Professor in Practice at Durham University in the Space Research Centre and the Law Department, Master of the Bench at Gray's Inn for Distinguished Barristers, Geopolitical Barrister from No 5 Chambers advising international governments, sits on the Board of the City of London Police Authority Board and City of London Corporation Finance Committee overseeing and scrutinising City Cash and Fund, Chairman of an international chamber of commerce, Ambassador for the World Humanitarian Forum, Co-Chair of Women Peace and Security, President of City Livery Club, President of Candlewick Ward Club and sits on various working groups and NGO's on thought leadership and charities. She strengthens economic ties internationally with the UK and delivers speeches both nationally and globally on various topics of current significance.

Continued ►

Efrén Díaz Díaz

Senior associate at the Mas y Calvet Law Firm

Efrén Díaz Díaz is a lawyer and Doctor of Law, a senior associate at the Mas y Calvet Law Firm in Madrid, where he leads the Technology and Space Law departments. He also serves as the Secretary General of the Spanish Association of Aeronautical and Space Law (AEDAE) and co-director of the Postgraduate Course in Aeronautical and Space Law at the Pontifical University of Comillas. Additionally, he teaches in master's programs at the University of Navarra and is a member of the Advisory Council of the Aeronautical and Space Law Section of the Madrid Bar Association. His work focuses on geospatial and space law, addressing legal issues tied to the rapidly evolving space industry, such as sustainability in space, the regulation of key legal aspects in Spain, the mission, objectives, and competencies of the Spanish Space Agency (AEE), innovation policies, waste management, national security, privacy, and ethics in artificial intelligence and geospatial applications—particularly regarding high-value data (geospatial, mobility, etc.) under new European regulations. He also explores intellectual property—its purpose, rights, content, types of works, and legal protection—along with challenges posed by emerging technologies (AI, Smart Cities) and the dual civil-military use in the space domain.

He has contributed to regulatory development in the space sector, notably in geospatial data regulation and its privacy implications. He authored the Geospatial Code published by Spain's Official State Gazette (BOE), a compendium of legal norms on Cartography and Geographic Information, Topography, Legal Practice, Notary Services, Real Estate Cadastre, Property Registry, and Outer Space. This work regulates space activities, including the registration of objects launched into space and applicable international treaties. His research promotes legal

Continued ►

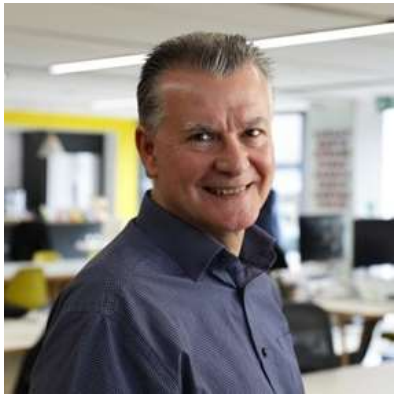
certainty in space infrastructure and activities, both civil and military, supporting sustainability within the New Space framework and the growth of the European space industry.

Berna Akcali Gur

LL.M. Module Convenor for Outer Space Law, Queen Mary University of London

Berna Akcali Gur is the LL.M. Module Convenor for Outer Space Law at the Centre for Commercial Law Studies, Queen Mary University of London. She is also an Associate Research Fellow at United Nations University within the Digital Governance Cluster, where she conducts research on space-related aspects of global digital governance. Recently, she has been appointed as the Chair for the Interplanetary Networks Working Group at the International Institute of Space Law (IISL). Berna's research focuses on public international law, world trade law, and EU Law implications of advancements in information communication technologies and space technologies. In her latest project, entitled "Global Governance of Satellite Broadband," she conducted a comprehensive law and policy analysis of the internet services provided by mega satellite constellations deployed in Low Earth Orbit, together with Professor Joanna Kulesza. Her earlier work identifies, analyses, and critically evaluates international law and policy problems arising from the global flows of data and the cross-border provision of digital content. In her more recent work, she also assesses and emphasizes the relationship of these problems with the geopolitics of global communications infrastructure.

Chris Hobbs



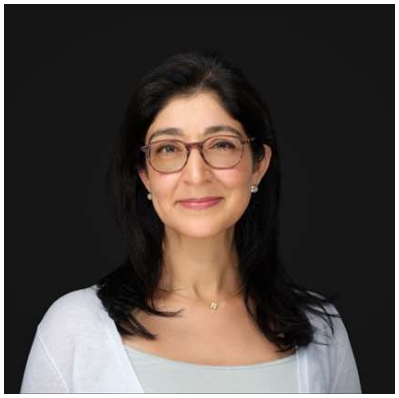
Enterprise Expert at SETsquared Surrey

Chris is an Enterprise Expert at SETsquared Surrey, an incubator supporting spin outs and scale ups from all sectors, including space. He has been a Royal Society Entrepreneur in Residence at the University of Southampton, supporting academics and researchers in Space and Astronomy to commercialise their research work,

Continued ►

potentially as spin out companies. As a former Head of Business Strategy at the Satellite Applications Catapult, he helped businesses to grow in the space sector, particularly through incubators and accelerators, and was previously Managing Director of a technology-based business producing portable solid-state hydrogen power sources for the aerospace, drone and automotive markets. He has also worked in two large corporates, QinetiQ and AEA Technology (formerly the UK Atomic Energy Authority). He has a PhD in Physics.

Aarti Holla-Maini



UNOOSA Director

UNOOSA Director, Ms. Aarti Holla-Maini, maintains responsibility for the Office's management and administration, provides strategic guidance to its work and ensures that it is implemented in accordance with the mandates of the General Assembly, the Committee on the Peaceful Uses of Outer Space (COPUOS), and the established policies of the United Nations. She develops the work programme of the Office and ensures the Office's efficiency, transparency and accountability.
Ms. Holla-Maini serves as the senior advisor to the Secretary-General and represents the SG at meetings and conferences on matters relating to the peaceful exploration and use of outer space. She also discharges the Secretary-General's obligations under the UN treaties and principles on outer space. Alongside the team in the Office of the Director, Ms. Holla-Maini oversees and coordinates the strategic direction and operational priorities of the Office, including the preparation, monitoring and implementation of the work plan, budget and the strategic framework of the Office.

Mitch Hunter-Scullion

CEO and Founder, Asteroid Mining Corporation

Mitch Hunter-Scullion is the CEO and Founder of Asteroid Mining Corporation. AMC develops robotic technologies to identify and unlock the economically viable resources of the Moon and Asteroids. He has given lectures at elite global institutions across the globe including Oxford, Brown and Tohoku

Continued ►

Universities. He has been the star of numerous documentaries on the topic of Space Resources, raised multiple rounds of investment and has been personally mentored by Chris Lewicki and Col Chris Hadfield. Mitch was also a Member of The Hague International Space Resources Governance Working Group and the Dubai International Financial Centre Courts of Space Working Group. He maintains a strong academic interest in the development of space resources law and policy both nationally and internationally.

Joanna Kulesza

Assistant Professor of International Law, Faculty of Law and Administration, University of Lodz, Poland; Executive Director, Lodz Cyber Hub

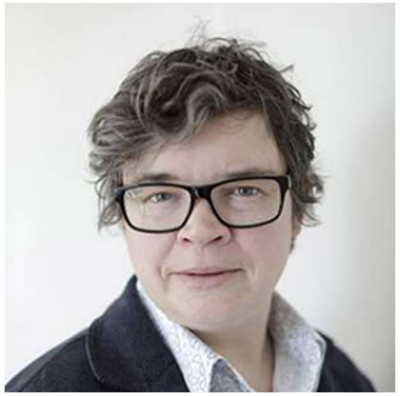
Joanna Kulesza is an Assistant Professor of International Law and Director of the Lodz Cyber Hub at the University of Lodz, where she leads research on the application of international law in cyberspace. She is also a liaison to the Governmental Advisory Committee of ICANN and a former Vice-Chair of the At-Large Advisory Committee (ALAC). Joanna served on the Scientific Committee of the European Union Agency for Fundamental Rights (2018-2023) and is a professor of criminal law at Vilnius University as well as a faculty member at Oslo University. She held postdoctoral positions at the University of Cambridge and Ludwig Maximilian University of Munich. Delivered guest lectures at prestigious academic institutions including Stanford University, the University of Oxford, Hebrew University in Jerusalem, and the University of Münster.
A participant in the "Oxford Process on International Law Protections in Cyberspace" and co-author of its declarations, Joanna also contributed to the United Nations (UN) Commission on developing an international convention to counter the misuse of information and communication technologies for criminal purposes (2021-2024). An expert in human rights, technology, and international law, Kulesza has authored numerous publications and actively engages in global policy initiatives on digital governance and cybersecurity.

Sharon Lemac-Vincere

PhD(Socio-Legal) MSc (Crim) MSc (HRM) LLB (Hons) B.A (Coms)

Dr Sharon Lemac-Vincere is an academic and an entrepreneur at the Hunter Centre for Entrepreneurship and a visiting academic at the International Space University, Strasbourg, specialising in the intersection of space technology and cybersecurity. With expertise spanning entrepreneurship, simulation technology, and legal frameworks, she launched an executive-level course with micro-credentials focused specifically on space cybersecurity in partnership with ISU. Dr Lemac-Vincere has also organised two conferences on space-sector cyber resilience (Lancaster University (2023) University of Strathclyde (2024) and pioneered a Virtual Space Cybersecurity Decision Making Platform to support real-time decision-making for industry leaders. Finally, Sharon has also designed a Scottish Tartan for Space called 'Vincere Ad Astra' and is currently making the first tartan spacesuit blending heritage with emerging technology.

Feja Lesniewska



Senior Lecturer in Sustainable Transitions and Environmental Law, Surrey Law School, University of Surrey

Dr Feja Lesniewska is an interdisciplinary legal scholar whose research explores the intersections between digital technologies, materials science, engineering, and the transition to more sustainable futures. Her work critically examines how growing reliance on digital infrastructures—such as satellites, the Internet of Things (IoT), and artificial intelligence (AI)—raises complex challenges for environmental sustainability and security. Feja's research spans key areas including climate change, forest governance, digital regulation, and the circular economy. She has conducted fieldwork in China, the EU, Ghana, Russia, and the UK, as well as through international organizations, bringing a global perspective to her analysis of law and technological systems.

Sungwoo Lim

Dr Sungwoo Lim was awarded a BEng and MSc in Architectural Engineering and Design at Konkuk University, South Korea, and a PhD in Engineering Design at the University of Strathclyde, UK. He is a senior member of the American Institute of Aeronautics and Astronautics (AIAA), a member of the Space Architecture Technical Committee (SATC) at AIAA, a UK node member of the Solar System Exploration Research Virtual Institution (SSERVI) at NASA AMES, a member of the Science Organising Committee of the European Lunar Symposium (ELS), and an advisory member of the Korean Institute for Advancement of Technology (KIAT). Dr. Lim's research path is closely related to long-term space exploration and the permanent settlement of other planetary bodies, which has become a critical R&D area aligned with NASA/ESA's Deep Space Gateway roadmap. The strong interdisciplinary nature of the research has enabled him to develop significant knowledge and skills in space engineering, planetary sciences, built environment, materials, engineering, and manufacturing, allowing him to work successfully in this field.
His focus has been on investigating the microwave heating behaviour of lunar regolith/simulants to gain an in-depth understanding of lunar materials and to develop a sustainable method of ISRU-derived lunar construction and resource extraction that supports sustainable lunar settlement. Since December 2019, he has been developing the Microwave Heating Demonstrator (MHD) payload and Microwave Heating-based 3D Printing (Mi3DP) platform concepts with support from UKSA and ESA.

Phil Merchant

UK and European patent attorney at Marks & Clerk LLP

Phil is a UK and European patent attorney at Marks & Clerk LLP, an international Intellectual Property (IP) firm with offices across the UK and worldwide. Prior to qualifying as a patent attorney, Phil studied Physics at the University of Oxford before obtaining a PhD from University College London in Condensed Matter Physics. Phil works with a variety of clients to prepare and file patent applications across many sectors, including those working in sustainable technologies and in space technologies. Phil's expertise includes securing patent protection for space innovation across the upstream and downstream, in areas such as spacecraft launch systems, orbit control, electric thruster design and operation, space debris identification and mitigation, and quantum communication methods. As part of his practice, Phil provides advice on relevant legal issues. This includes IP strategy advice for space technologies in view of patent law requirements across multiple countries and the applicability of such laws in outer space. Phil also works closely with accelerators and start-up programmes to provide early-stage support and advice for entrepreneurs in utilising their IP for effective commercialisation of their inventions.

Continued ►

Adam Mitchell

Climate and Sustainability Engineer (SLE-SC) Directorate of Strategy, Legal and External Affairs (D/SLE). ESA

Adam began his career with a Ph.D. in the defence industry before transitioning to a postdoctoral position at the European Space Agency (ESA). He spent nine years at ESA as a Materials Physics and Chemistry Engineer, specializing in advanced materials research. Currently, he is part of the Climate and Sustainability Office, contributing to ESA's Green Agenda with a focus on understanding the atmospheric effects of spacecraft re-entry and its environmental impact.

Chris Newlands

Entrepreneur, Space Aye

Chris is one of the UK's most connected entrepreneurs in the Technology and Space sectors. In December 2021, he was named in 4th position, in the World's top 10 space entrepreneurs list, beaten only by Branson, Musk and Bezos. He was recently positioned in 3rd place globally in GeekWire's TechStars 2025 list. His organisation Space Aye (pronounced eye), uniquely merges real-time satellite imagery with IoT data, creating huge societal and commercial opportunities which will touch every sector. The ability to monitor wildfires, identifying and directing the responders, in real-time from space, will help extinguish fires more quickly, saving lives and reducing the impact on our fragile planet's climate. Their patents offer the ability to engage with customers, employees and monitor livestock and assets visually from space, in real-time. It has been suggested by the President of the Hague Institute for Global Justice that their patents could form the legal basis, for new standards and laws for space derived data. Space Aye recently launched the Large Terrestrial Model (LTM) which they believe will power AI for decades to come. The Scottish Government awarded him the title of Global Scot and he became a Professor of Practice in 2021. He is a Royal Navy Veteran, a Member of the Scotland International Space Advisory Committee, a member of the World Geospatial Industry Council and was the Co-Chair of the Open Geospatial Consortium UK&I Forum.

Michael Picard

Lecturer in International Environmental Law, University of Edinburgh

Michael Hennessy Picard is a Lecturer in International Environmental Law at the University of Edinburgh and a member of the UCL Waste Law Research Group. In collaboration with colleagues from Southampton, Space Forge, Secure World Foundation and Edinburgh, Picard is arguing for regulatory oversight of satellite re-entry, ablation and atmospheric pollution. He is also collaborating with a team to set up an

Continued ▶

online platform - the Green Toolkit for Space, which includes recommendations for SMEs on sustainable manufacturing, procurement, batteries, rocket fuel, and mission design choices across the lifecycle of space activities. A recent Report for the Scottish Council on Global Affairs examines four pressing issues related to space environmentalism and sustainability in Scotland: space congestion, the protection of Dark Skies, Scotland's launch capabilities, and Earth-Space Sustainability.

Neil Stevens

Head of Space, Price Forbes

Neil is Head of Space at Price Forbes, a dedicated space insurance broker. He is an English trained lawyer with almost 30 years' experience in the space insurance sector. Neil has worked as a broker and underwriter and lectured on space law and space insurance. He is a recognised expert in space liability matters and has advised (amongst others) NASA, ESA, UK Space Agency, and the governments of Bermuda, Portugal, Greece. His advice and recommendations have led to changes in the law in the UK on space matters. Neil is recognised as an innovator and product developer. He is a Fellow of the Royal Aeronautical Society and member of the Advisory Board of the Earth Space Sustainability Initiative.

Dr Fabio Tronchetti

Associate Professor, School of Law, Northumbria University

Dr Fabio Tronchetti works as an Associate Professor at the School of Law of Northumbria University (United Kingdom). Previously, he was Co-Director of the Institute of Space Law and Strategy and Associate Professor at Beihang University, Beijing (China), Adjunct Professor of Comparative National Space Law at the University of Mississippi (United States), Lecturer at the International Institute of Air and Space Law, Leiden University (the Netherlands). Dr Tronchetti is the recipient of the 2019 International Institute of Space Law (IISL) Young Achiever Award and is a Director of the International Institute of Space Law (IISL).

Continued ▶

He has published extensively in the field of space law and policy (he received the 2015 IAA Social Science Book Award) and has advised governments and private companies in the drafting of domestic space legislation and the setting up of space-related projects crossing multiple jurisdictions.

Joanne Wheeler MBE

Director, Earth & Space Sustainability Initiative and Managing Partner. Alden Legal and Honorary Professor University of Leicester

Joanne is a leading international expert in the field of satellite and space law, policy, regulation, spectrum issues and commercial contracts, having worked at Ofcom, ESA and for over 25 years in private legal practice in this area. She is the Director of the Earth & Space Sustainability Initiative (ESSI), co-founder and Chair of the Satellite Finance Network and the Prospero Space Fellowship. She is a Fellow of the Royal Astronomical Society, the Royal Aeronautical Society and Deputy Chair of the National Space Centre. She Co-Chairs the UK Government's Spaceflight Safety and Regulatory Council and was appointed as an honorary Professor by the University of Leicester in 2022.

Andrew Ross Wilson

Lecturer in Environmental Management, Glasgow Caledonian University

Dr Andrew Ross Wilson is a Lecturer in Environmental Management at Glasgow Caledonian University (GCU). He holds a BSc (Hons) in Environmental Management from GCU and a PhD in Mechanical and Aerospace Engineering from the University of Strathclyde. Andrew specialises in space sustainability, with a particular focus on life cycle assessment, carbon accounting and energy systems of engineering projects. However, Andrew's technical background is in environmental management, and his work is extremely interdisciplinary. In this regard, Andrew's services are often consulted by external parties with regard to the assessment, mitigation and communication of sustainability issues. This can often vary from being very specific and technical-facing, to being broad and societal-facing, and the range of risks, impacts and decision-making processes in between. Ultimately, his work aims to inform how society can transition towards a future that is truly sustainable, as envisaged through the 2030 Agenda for Sustainable Development.
Due to his contribution to science and technological development, Andrew was awarded the 2018 Young Scot Environment Award, designated one of Junior Chamber International's Ten Outstanding Young Persons of Scotland in 2019, won the ESA-EISC Space for Sustainability Award 2021, and was named GCU Alumni of the Year 2022.

Continued ►

FACULTY OF ARTS, BUSINESS AND AND SOCIAL SCIENCES

University of Surrey
Guildford, GU2 7XH, UK

surrey.ac.uk