

## GREEN COLLEGE CROSS-SECTORAL CONSULTATION SECURITY, SCIENCE AND LAW IN THE NEW SPACE ERA *in association with The Outer Space Institute*

This series will address a number of key issues concerning the sustainable development of space. Humanity's use of space is changing rapidly due to the lowering costs of space launches and the increasing number of state and non-state actors with launch capabilities, including large companies. However, along with these growing uses of space comes the risk of unintended consequences. Human space activity has already resulted in the accumulation of debris in orbit, which threatens satellites. Most of this debris is due to a combination of expendable rocketry and unintentional breakups of spacecraft. Yet, an unsettling amount of debris has also been caused by the intentional destruction of satellites in a display of military capabilities. Plans for large constellations of satellites promise global internet, but that will place thousands more satellites into the sky, creating light pollution for astronomers and exacerbating the production of debris. Mining asteroids also carries risks, such as unintentionally redirecting asteroids onto Earth-impact trajectories or causing new meteoroid streams that could threaten Earth's satellites or lunar surface operations. What can be done to address the debris problem? What are the security challenges in space? Who will regulate space mining and resolve conflicts? Is space mining even legal under international law?

ALL TALKS ARE AT GREEN COLLEGE IN THE COACH HOUSE AND OPEN TO THE PUBLIC WITHOUT CHARGE

### THE OPPORTUNITIES AND CHALLENGES FACING THE NEW USES OF SPACE: PERSPECTIVES FROM GOVERNANCE, SCIENCE AND INDUSTRY

**Michael Byers**, Political Science, UBC, Canada Research Chair in Global Politics and International Law, Co-Director, The Outer Space Institute; **Aaron Boley**, Physics and Astronomy, UBC, Canada Research Chair in Planetary Astronomy, Co-Director, The Outer Space Institute; **Ellyne Kinney**, Principal Solutions Engineer, MacDonald, Dettwiler and Associates (MDA)  
*Wednesday, September 11, 5-6:30 pm, with reception to follow*

For the first event of this series, Outer Space Institute (OSI) co-founders Michael Byers and Aaron Boley will outline key issues in space governance, science and astro-environmentalism, while providing a glimpse into the exciting topics that the speakers will cover during the next eight months. They will be joined by Ellyne Kinney, who will share her perspectives on industry's role in addressing science, security and governance challenges for space use.

### CHALLENGES TO FUTURE SPACE GOVERNANCE

**James Clay Moltz**, National Security Affairs Department, Naval Postgraduate School (Monterey, California)  
*Wednesday, October 9, 5-6:30 pm*

Despite the increasing number of countries, companies and even private individuals active in space, the basic treaties and other rules governing space have not changed since the Cold War. Yet problems related to increased space traffic, dangerous orbital debris, and spectrum crowding pose serious risks to safe civilian

Those attending talks at Green College are warmly invited to come to dinner.

For information on making dinner reservations, see [www.greencollege.ubc.ca/how-attend-dinner](http://www.greencollege.ubc.ca/how-attend-dinner)

and commercial operations. In addition, many more national militaries are operating in space today, some of them pursuing counterspace weapons. Thus, a major question faces the international community: "Will we be able to govern space successfully in the 21st century?" This talk will examine the development of existing rules in space and lay out emerging challenges to preventing conflict and the possible ruination of critical orbits. The presentation will conclude with a discussion of possible paths forward to the creation of new rules and more effective international tools for future space governance.

### WHY DOES NASA HAVE LAWYERS?

**Robin J. Frank** (Washington DC)  
*Wednesday, November 13, 5-6:30 pm*

Robin J. Frank is the former Senior Counsel (2004-2014) and Associate General Counsel (2015-2018) for NASA, where she played a lead role in drafting, negotiating and concluding international agreements with foreign governments and space agencies. Her work has addressed a wide range of issues concerning space use and coordination, including the International Space Station, exploration beyond low-Earth orbit, exploration and utilization of celestial bodies, and legal issues in planetary defence and planetary protection. She has further served as a NASA legal representative on the Legal Working Group for the Space Mission Planning Advisory Group (SMPAG) as well as the NASA representative on the USG delegation to the Legal Subcommittee of the UN Committee on the Peaceful Uses of Outer Space and as a delegate to various International Telecommunication Union Plenipotentiary and WRCs.



**The Outer Space Institute**