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Joan Johnson-Freese, Naval War College

Travel & Companion

I will be arriving in Milan on Sunday January 6, 2020 with my companion Richard Cromwell. We plan to take your bus from the airport. I will notify you as soon as we have made airline reservations regarding which airport.

Material on me & my lecture

Joan Johnson-Freese

Dr. Joan Johnson-Freese is a University Professor, holds the Charles F. Bolden, Jr. Chair in Science, Space & Technology, and former Chair of the National Security Affairs Department at the Naval War College (NWC). In her faculty capacity she teaches Security Studies and Regional Security to US military officers and security practitioners from the United States and over 50 other countries. Prior to joining the NWC faculty in 2002, Dr. Johnson-Freese taught at the Asia-Pacific Center for Security Studies in Honolulu, HI, the Air War College in Montgomery, AL, and in the Political Science Department at the University of Central Florida in Orlando, FL, where she was also the Director of the Center for Space Policy and Law. She has also been part of the Government Department faculty of Harvard Extension School and Harvard Summer School since 2004, where she teaches courses on Leadership in War and Peace, Globalization and US National Security, and Women, Peace and Security.

As a political scientist and educator, her research focuses on space security and Women, Peace & Security. She is the author of seven books on space security, the most recent (2016) *Space Warfare in the 21st Century: Arming the Heavens*, and over 100 published articles, many with a

particular focus on the Chinese space program. She was a member of the Space Studies Board of the National Academies of Science from 2010-2014, has testified before Congress on space topics on multiple occasions, and regularly works with the media on space issues, including: *The New York Times*, *USA Today*, *Time*, *Popular Science*, *Popular Mechanics*, ABC, CBS, NBC, CNN, Voice of America, National Public Radio, and The Discovery Channel. She has also served as a faculty member of the International Space University since 1993, and previously on the Advisory Board of the Secure World Foundation, the Space Studies Board of the National Academy of Sciences, and currently on the Breakthrough Starshot Board. Dr. Johnson-Freese has published multiple articles on aspects of Women, Peace & Security and her book, *Women, Peace & Security: An Introduction*, was released in December 2018. She is the recipient of the Department of the Air Force Meritorious Service Award, 2 Department of the Navy Meritorious Civilian Service Awards, and a Department of the Navy Superior Civilian Service Award.

The Geostrategic Space Landscape

Two parallel trends currently shape the geostrategic space landscape: the overt weaponization of space as part of Great Power Competition and a plethora of new space players engaged in space development in unprecedented and expanded ways.

Space has been militarized at least since the 1940's when V-2 rockets began flying. Space technology like, for example, nuclear energy, artificial intelligence, cyber and directed energy is dual-use technology. That means it has value to both military and civilian communities, and it is difficult to tell whether its military use is for offensive or defense purposes. Satellite imagery can be used for city planning or weapons targeting. The same basic capabilities needed to build a rocket to launch a satellite into orbit are also needed to build missiles to deliver warheads. And while missile defense is considered by its builder as defensive technology, an adversary may rightly see its capabilities as having the potential to be used as an anti-satellite weapon. So, while the US' Apollo program in the 1960's was lauded as a civilian triumph, the Chinese human spaceflight program is today eyed with suspicion in the US as a Trojan horse for developing military space technology. Until fairly recently it was only states that had the funds, facilities and brainpower to engage in space activity. That, however, has changed considerably. There is now a plethora of public and private space players, with mature and maturing levels of space technology and interest, and the money to invest in technology development. Opportunities and challenges abound for these new space players – and nations not engaged in Great Power Competition - navigating the security environment in support of the kind of space development anticipated but elusive since the 1960's.

Reading & Listening Material

The first four (NPR, NPR, Georgetown, RSIS) are info on current activities and the Chinese space program. The second two (Hitchens-JJF, Colby) provide the different sides of the space debate – restraint v prepare for warfighting. Warfighting prevailed.

<https://www.npr.org/2019/01/03/682021434/how-chinas-space-ambitions-fit-into-its-larger-geopolitical-strategy>

<https://www.npr.org/2019/07/12/736617703/as-america-celebrates-apollo-a-new-moon-race-is-underway>

<https://www.georgetownjournalofinternationalaffairs.org/online-edition/2018/5/28/y8ke2nb3d2o18bxbpozmdkkcrvryd>

<https://www.rsis.edu.sg/rsis-publication/rsis/the-next-race-the-geostrategic-contest-in-space/#.Xa9qny-ZPs0>

<https://www.atlanticcouncil.org/in-depth-research-reports/report/toward-a-new-national-security-space-strategy-time-for-a-strategic-rebalancing-2/>

<https://www.cnas.org/publications/reports/from-sanctuary-to-battlefield-a-framework-for-a-us-defense-and-deterrence-strategy-for-space>