

## IAF COMMITTEE ON SPACE SECURITY

The Committee is pursuing in 2021 the work started in 2016 regarding a range of security issues addressing economic, business, technical, political, legal through a series of graded risks (1 to 5) using the matrix below. But this year we use a different format based on a panel discussion, instead of traditional presentations, under the heading of **Space debris: Developing a framework for clear policy options**. A first discussion took place on the 29<sup>th</sup> of March meeting, the second one is planned during the IAC in Dubai.

A/ The proposed discussion among experts explores the possibilities of beginning to develop a more focused framework to categorize, organize, and suggest better approaches to solutions. These will range from looking at near-term practical and relatively inexpensive terrestrial methods to mitigate future debris to longer term ones that will require the use of technology not currently available at any cost.

During the March meeting, the panel focused on 3 specific topics:

1. Aspects of the debris problem that can be improved right now and with minimum cost.
2. International policy leadership addressing which nations or organizations should assume that leadership. Examples include UNCOUOS, multi-national agreements, and effective national laws and regulations. What is an acceptable system for all actors in space? What is the role of the several major space-faring nations whose space objects have created most of the debris?
3. How can the various proposed international coordination mechanisms for debris mitigation and STM be themselves coordinated? Many of the proposals are from non-governmental (academic, non-for-profit, industrial consortia, etc.). Can they be successful with (or without) formal government backing?

### Panellists:

Prof Pascale Ehrenfreund (IAF),  
Dr Darren McKnight (LeoLabs, USA),  
Dr Xavier Pasco (FRS, France),  
Prof Kazuto Suzuki (The University of Tokyo),  
Prof Guoyu Wang (Beijing Institute of Technology Law School).

### Moderators:

Prof Henry Hertzfeld (Space Policy Institute, George Washington University, Washington DC)  
Prof Serge Plattard (Chair), University College London  
Rapporteur:  
Nicolas Peter, Policies and Programmes Coordination Department, ESA

Concluding remarks will be reported after the second panel discussion in Dubai. As of now, it is not yet decided if the second panel will consist of the same discussants, or completely / partially different ones.

B/ Looking at the future activities of the Committee, as a departing Chair after two terms, I would recommend continuing this theme of discussion to test practical recommendations that could feed proposals to be tabled in formal national and international arenas.

This Committee also should focus on i) the many aspects of space cybersecurity, a growing concern, ii) mounting security issues implied by undergoing and future large LEO constellations, and iii) continue its efforts to broaden the scope covered by the new IAC Symposium on Space Security (new title submitted last year but still no response from the IAF Bureau for IAC-22) by adding one or two sessions. 39 abstracts were submitted for IAC-21.

C/ Finally, as departing Chair, I remain concerned by the following, as already mentioned in the previous brief: the number of attendees to our meetings varies between 25 to 30 and has been in the same bracket since 2015, with a peak participation well beyond 30 at the Washington DC meeting in October 2019. While the Committee lists about 60 members, experts, and friends, less than 50 % show up, whatever and wherever the committee meetings are, real or distant. Some members have never showed up for the last

5 years and a half, despite the number of reminders. When the Committee will be renewed in October 2021, we will need to go through a rigorous cleaning of the member's list, dropping those who never showed up over several meetings, and make clear what being a member of an IAF Technical Committee means in terms of engagement and attendance.

Prof Serge Plattard,  
Chair of the IAF TC 06 on Space Security

Priority Urgency	Problem to Address	Type of Risk					
		Economic	Business	Technical	Political	Legal	
1	Mega-constellations Cubesats/smallsats, debris issues, cubesats-100kg class in LEO	1	3	5	1	2	12
2	Vulnerabilities of space systems			4	1	1	6
2	Supply chain risks	2	1		1		4
1	Sharing surveillance data		1	1	5	1	8
1	Implications of non-registered space objects and the threats they posed to other space-objects		1	1	4	3	9
2	The need for space weather common standards			4	1		5
1	Spectrum allocation and management including the international/domestic regulatory interface		1	4	1	4	10
2	Maritime Domain Awareness (MDA)				1		1
		3	7	19	15	11	