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Conference of the International Society of Military Sciences

*Promoting Peace and Security
in a new incomprehensible
and non-linear world*



INSTITUTO UNIVERSITÁRIO MILITAR
MILITARY UNIVERSITY INSTITUTE OF PORTUGAL



Book of Abstracts (3rd Edition, revised)

*Coordinators:
Lieutenant Colonel Cristina Fachada
Captain Coelho Gil
Commodore Ramalho Marreiros*



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Book of Abstracts **ISMS 2022 Conference of the** **International Society of Military Sciences** (Lisbon, October 10-13) (3rd edition, revised)

Coordinators

Lieutenant Colonel Cristina Fachada, PhD
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IUM Research and Development Center
August 2022

¹ WG1: War Studies; WG2: Military History ; WG3: Military Technology; WG4: Leadership, command, and basic competences; WG5: Law and ethics; WG6: Security and defence policy; WG7: Armed Forces and Society; WG8: Defence Management and Economics; WG9: Military Education; WG10: Strategy.

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General introduction

The International Society of Military Sciences (ISMS) “is a free association of the highest level of military education institutions in small democratic countries. These are typically defence universities with a mandate for generating, curating, and disseminating knowledge of military sciences” (ISMS, 2022)¹. The member organizations are the Austrian National Defence Academy, Baltic Defence College, Royal Military College of Canada, Royal Danish Defence College, Finnish National Defence University, Netherlands Defence Academy, Norwegian Defence University College, Swedish Defence University, War Studies University of Poland and Military University Institute of Portugal (ISMS, 2022).

Portugal, through its Military University Institute [Instituto Universitário Militar, IUM], has been part of this organization since 2019, having assumed the annual presidency in October 2021 (with Commodore João Marreiros as the President of the ISMS Council and Captain João Gil as the Conference Chair; both from the IUM). From October 10 to 13 of 2022, IUM will host, in its facilities, the 14th Annual Conference of the ISMS, as shown in Figure 1.

International Society of Military Sciences
Annual Conference 2022
“Promoting Peace and Security in a new incomprehensible and non-linear world”
A Hybrid Conference
10-13 October 2022
Military University Institute of Portugal
Lisbon, Portugal

President: Commodore Paulo Marreiros, Portuguese Military University Institute of Portugal
Past president: Dr. Harry Kowal, Royal Military College of Canada
President-elect: Dr. Niels Bo Poulsen, Royal Danish Defence College
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Portugal: Paulo Marreiros, Commodore, Military University Institute of Portugal.	WG9: Military Education, Nuno Santos Loureiro, Military University Institute, Portugal.
Sweden: Stefan Silfverskiold, Commander, Chairman of Research and Education Board, Swedish Defence University.	WG10: Strategy, Dirk Heinzmann, Austria.

Figure 1 - ISMS Annual Conference 2022' members

¹ International Society of Military Sciences (ISMS) (2022). *Member Institutions*. Retrieved from <https://www.isofms.org/member-organizations>

In line with this, the present publication includes 163 *Extended Abstracts*², corresponding to 97% of the total amount (N=168) that were submitted to the ISMS 2022 and that will be presented in the Conference.

These *extended abstracts* – organized in the WG they related to – include, in addition to the text and the keywords, the author(s) name, affiliation, country and email address (as the author' indicated in the EasyChair platform), and, in most cases, the references used/suggested by the author(s). Also, in the upper left corner of the first page of each extended abstract, the submission number given automatically by the EasyChair platform is included.

Authors who wish to submit the article associated with the *extended abstracts* to the *Portuguese Journal of Military Sciences* – a double-blind peer-reviewed international journal, published in two versions (a digital version, bilingual, Portuguese and English, and a printed version) –, should comply with the *Call for Papers* and *IUM Author Guidelines*, both available at [Call for papers – Portuguese Journal of Military Sciences \(ium.pt\)](#) and [IUM Author Guidelines_4th edition, revised and updated.pdf](#).

We wish you an enjoyable and interesting reading.

IUM, Portugal, 15 of August 2022

The coordinators,

LCol. Cristina Fachada
Capt. Coelho Gil
Cdre. Ramalho Marreiros

² These *extended abstracts* are ordered by working groups and, in each of them, by their presentation order at the Conference.



WG1 – War Studies

Space: The Final Frontier of War?

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Iconic films such as *Star Wars* (1977) and *Starship Troopers* (1997) picture conflicts fought in outer space. *UFO* (1970) tells the story of a high-tech military organization established to defend Earth from space attack. *Space: 1999* (1975) and *Star Trek* (1966) are about travelling in deep space where no man has "bodily" gone before and imagine a technology that does not exist. Sometimes science fiction, inspired by science possibilities that one day can come true, simply imagines the future. Military applications of space technology, and considerations on space as a future theater of war when they would become technologically possible, were outlined in the *Introduction to Outer Space*, a pamphlet edited by the White House in 1958.

To avoid the militarization of space and celestial bodies, and to guarantee their exploration and use for peaceful purposes to all countries, in 1967 the US, the U.K. and the Soviet Union opened for signature the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, which has become customary international law (White, 2000). The Outer Space Treaty forbids from placing in Earth orbit weapons of mass destruction, including nuclear weapons, or otherwise stationing them in outer space, but does not prohibit the placement of conventional weapons, and thus some highly destructive attack strategies such as kinetic bombardment are still potentially allowable (Bourbonniere & Lee, 2007).

Since 1984, the Conference on Disarmament (CD), a body established by the UN General, has considered proposals, including draft treaties, aimed at preventing the placement of weapons in outer space. In 1998 Russia and China proposed a Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Outer Space Objects (PPWT). An amended text drafted in 2014 was rejected by the US because it failed to address a series of relevant issues: it did not provide a definition of "outer space" neither of what constitutes a "weapon in outer space", and it did not ban terrestrially-based ASAT systems launched from the ground (CD, 2014; UNGA GA/DIS/3591; Plath, 2018).

The US refused to negotiate a Proposed Prevention of an Arms Race in Space (PAROS) treaty as an international legally binding instrument in the CD, as Washington gathers that it simply mirrored the PPWT, including its failures. Therefore, the US voted against the Russian's No First Placement of Weapons in Outer Space (NFP) resolution (UNGA, A/C.1/72/L.53). So far, the international community failed to reach a solution to prevent an arms race in outer space. Space war is no more a science-fiction scenario; it's an emerging reality.

KEYWORDS

Space; International law; International humanitarian law; Emerging disruptive technologies.

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