

Non-Proliferation and Emerging Technologies: Interview with Ulrich Kühn



Dr. Ulrich Kühn is Head of the “Arms Control and Emerging Technologies” programme at the Institute for Peace Research and Security Policy at the University of Hamburg (IFSH). He is also a Non-Resident Scholar of the Nuclear Policy Program, Carnegie Endowment for International Peace, and founder and Permanent Member of the Trilateral Deep Cuts Commission. He previously worked for the Vienna Center for Disarmament and Non-Proliferation, Helmut Schmidt University and the German Federal Foreign Office.

The Institute for Peace Research and Security Policy at the University of Hamburg (IFSH) has recently expanded its research on Arms Control and Emerging Technologies. What are the main topics that you are exploring within this new program?

IFSH Hamburg has a rich history of researching arms control and dual-use technologies - one that dates back to the early 1970s. Now, with the financial support of the German Foreign Office we are able to significantly expand our research and tackle such diverse topics as autonomous weapons, cyber security or artificial intelligence. We just hired eight senior researchers from three different continents. For me, the big question is how to steer the potential impact of those enabling technologies on peace and security in the 21st century, and to do so in a cooperative fashion. Aside from emerging technologies, we are trying to help overcome the deep crisis in arms control policies by developing new concepts for verification and negotiation. My goal is to establish a “Hamburg School” of thought on all these issues so that Hamburg becomes a leading hub for innovative and creative thinking on arms control and emerging technologies.

How would you describe the impact of “emerging technologies” on arms control and non-proliferation regimes?

To be honest, we do not know yet. Some technologies, such as additive manufacturing might have a far-ranging impact on work procedures comparable to the assembly line but may also have only marginal ramifications in the realm of non-proliferation. Other technologies such as machine learning might provide the basis for fully autonomous weapons systems that could significantly change how humanity thinks about and conducts war. Then again,

certain technologies such as hypersonic glide vehicles might only occupy a niche in military planning. What I do not like is the current hype around emerging tech. Technologies have always emerged and we have seen many technological leaps forward. We have also seen technologies stagnating for decades - AI being one example. Perhaps most importantly, policy-makers are under the false impression that they are coming too late and that there is no time for regulating new dual-use technologies. But that impression is misleading. It took states over 40 years to come up with a regulatory frame for missiles - the Missile Technology Control Regime. Sometimes political processes simply take time.

What are, in your view, the priority steps that the EU should take to contribute to the ongoing efforts to regulate the use of new technologies?

There are a couple of things the EU can do, both in the realm of regulating as well as advancing emerging technologies. The Commission’s Horizon 2020 “Future and Emerging Technologies” programme for instance aims at supporting Europe’s science base by funding specific projects on nanotechnologies, quantum technologies and others. Here, more and sustained funding could help Europe close the gap with players such as the United States and China. At the same time, export control mechanisms need to be taken seriously. They have to be inclusive and streamlined - and by inclusive I mean industry has to be on board and early on. The difficulty will be finding the sweet spot between regulating the dual-use character of certain enabling technologies and at the same time benefitting from those technologies, in both the civilian and military realms.

Keeping Up with the Changing Proliferation Finance Landscape

Counter-proliferation finance (CPF) - the effort to identify and obstruct the financial activities of proliferators - is not a new concept. In 2004, [United Nations Security Council Resolution \(UNSCR\) 1540](#) called on Member States to adopt and enforce legislation to prevent the financing of WMD proliferation; in 2010, the Financial Action Task Force - the global standard-setter on countering financial crime - [proposed a working definition](#) of proliferation finance (PF) and eventually included CPF into its mandate; in 2006, [UNSCR 1737](#) called on Member States to prevent financial assistance in support of Iranian proliferation efforts. Yet, all these measures addressed PF in its narrowest sense - the direct financing of the development, transfer and use of WMD.

Since then, the international community’s understanding of PF has expanded significantly, largely in response to developments in North Korea and concerns about Iran’s nuclear programme. The expansive PF ecosystem is highlighted, in particular, by North Korea’s sources of financing: its construction businesses in Africa, its front companies channeling funds across Asia and its sale of coal off the coast of China.

Despite this expanded spectrum of PF activities, many governments continue to think of PF risk strictly in terms of trade in sensitive goods or transactions with countries of proliferation concern. At the same time, financial regulators tend to conflate PF with other forms of financial crime, assuming that the same method can be used for managing sanctions, money laundering, terrorist financing and PF risks. This produces a CPF regime that fails to consider all the ways proliferators may exploit a national economy - including raising funds, moving them and using them for the procurement of WMD materials and technology.

Policy makers must therefore think outside the box, expanding cooperation between the public and private sectors on tracking PF typologies, conducting a national PF risk assessment that considers the full spectrum of PF threats, and including in CPF conversations allies who may not traditionally be involved in countering other forms of financial crime. Ultimately, to keep pace with the increasingly complex PF threat, CPF efforts must prove equally creative and adaptable.

Darya Dolzikova

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EU News

Ahead of the 74th session of the United Nations General Assembly (UNGA), over 100 European political, diplomatic and military figures called on leaders at UNGA to address rising nuclear risk, and renew commitments to international nuclear diplomacy and arms control.

The full statement and list of signatories is reproduced in English [here](#), and is also available in [French](#), [German](#), [Italian](#) and [Russian](#).

Latest Publications

Is it time to ditch the NPT? Joelen Pretorius, Tom Sauer, University of Antwerp - Research Group in International Politics, 2019

Controlling Novichoks after Salisbury: revising the Chemical Weapons Convention schedules. Stefano Costanzi, Gregory D. Koblentz, The Nonproliferation Review, 2019

Network Calls

SECTION HEAD

The International Atomic Energy Agency (IAEA), is seeking a Section Head for its Non-Proliferation and Policy-Making department.

Location: Vienna

Salary: net base salary starting at US \$87108

Application deadline: 28 October 2019

SENIOR RESEARCHER AND PROGRAMME DIRECTOR - AMEX PROGRAMME

The Stockholm International Peace Research Institute (SIPRI) is seeking a Senior Researcher and Programme Director for its Arms and Military Expenditure (AMEX) programme. The SIPRI AMEX programme is a part of SIPRI's Armament and Disarmament research area.

Location: Stockholm

Salary: TBD

Applications will be accepted until the position is filled.

EU INSTITUTIONAL NEWS

EU delivers a statement in response to the latest missile test by DPRK

On 2 October 2019, the Spokesperson for Foreign Affairs and Security Policy/European Neighbourhood Policy and Enlargement Negotiations, Maja Kocijancic, delivered a statement on behalf of the European Union in response to the Democratic People's Republic of Korea (DPRK) latest ballistic missile launch at sea.

The launch, confirmed by the Korean Central News Agency and defined by the regime as a [significant achievement](#) given that it was the country's first ballistic missile launched from a submarine, was carried out one day after Pyongyang and Washington [agreed to resume nuclear talks](#).

The EU Spokesperson noted that the firing of such a missile, the SLBM Pukguksong-3, violates a number of UN Security Council resolutions and constitutes a provocative action that "undermines the efforts by the international community to build trust, enhance security and nurture a sustained peace process on the Korean peninsula".

Kocijancic reiterated the EU's expectation that the DPRK commit to credible and meaningful diplomatic negotiations, and expressed full support to all international efforts for "finding a diplomatic solution leading to lasting peace and security on the Korean Peninsula".

For more information:

[Statement by the Spokesperson on the latest provocation by the Democratic People's Republic of Korea](#)

NETWORK NEWS

SIPRI, a member of the EUNPD Consortium, hosts the Forth Stockholm Security Conference

On 3 October 2019, the Stockholm International Peace Research Institute (SIPRI) - in partnership with Crisis Management Initiative (CMI), Mercy Corps, the Munich Security Conference and the Swedish Civil Contingencies Agency (MSB) - hosted the 4th edition of the Stockholm Security Conference on the theme 'Conflict and technology: Now and in the future'.

The Conference convened over 200 experts, policymakers and practitioners to explore conflict trends and new technological developments as well as their implications for ongoing conflicts today and in the future. The [keynote speech](#) was delivered by Izumi Nakamitsu, Under-Secretary-General and High Representative for Disarmament Affairs at the United Nations who shared some of the major conflict trends from a UN perspective and the implications they hold for international peace and security. During the plenaries and break-out sessions, participants and panellists continued to discuss several topical issues in this framework, such as the future of mediation and civilian protection, the impact of advances in AI and autonomy technologies and their implications for weapons systems, warfare and cyber-crisis management.

More information at:

<https://www.sipri.org/news/press-release/2019/stockholm-security-conference-opens-unpredictable-new-normal>

Contact: [Dr. Sibylle Bauer](#)

Watch Izumi Nakamitsu's key note speech video and the opening and closing panels at: <https://www.youtube.com/user/SIPRIorg>