

UK Project on Nuclear Issues 2021 Annual Conference

Tuesday 8 June 2021 (time in BST)

- 1300 – 1315 Welcome Remarks
[Tom Plant](#), UK PONI Director and Director of Proliferation and Nuclear Policy, RUSI
- 1315 – 1400 **Keynote Speech and Q&A**
- Chair: **Tom Plant**, UK PONI Director and Director of Proliferation and Nuclear Policy, RUSI
 Speaker: **Vanessa Nicholls**, Director General Defence Nuclear Organisation, Ministry of Defence
- 1400 – 1415 **Break**
- 1415 – 1530 **Panel One: New perspectives on Arms Control and Disarmament**
- Chair: **[Dr Matthew Harries](#)**, Senior Research Fellow, RUSI
 Speakers: **Lydia Wachs**, Research Assistant, SWP Berlin (The German Institute for International and Security Affairs)
Revival of the Dead Hand? Russian Political and Military Elite's Views on AI and Autonomy in Conventional and Nuclear Forces
Claudia Westwood, Network Liaison Officer, European Leadership Network
The UK's Integrated Review: Implications for Transparency Measures in Multilateral Arms Control Forums
Ekaterina Lapanovich, PhD Candidate Department of Theory and History of International Relations, Ural Federal University.
The 'Hijacked' Initiative: from the Humanitarian Initiative to the Ban Treaty...and Back Again?
- 1530 – 1600 **Break**
- 1600 – 1715 **Panel Two: New Technologies and Deterrence**
- Chair: **[Marion Messmer](#)**, Co-Director, BASIC
 Speakers: **Cameron Hunter**, Research Associate, University of Leicester
The 'Rupture-Talk' of Emerging Tech versus Nuclear Deterrence
Dalia Landau, Undergraduate Student in Religion, Politics and Society, University of Leeds
The Impact of New Technology on Strategic Stability: A Third Nuclear Age
Hazel Carter, Engineer, UK Ministry of Defence and **Oliver Porter**, Software Development Tester, MASS
Autonomous Nuclear Weapons: Ethics, International Law and Future Stability
 Contributors: Alison Nightingales, Josh West and James Curtiss

Wednesday 9 June 2021

1230 – 1345

Panel Three: Technology and Communication in Future Nuclear Deterrents

Chair: [Professor Deeph Chana](#), Co-Director of Institute for Science & Technology, Imperial College London

Speakers: **Mat Budsworth**, Radiation Effects Scientist, Atomic Weapons Establishment
Replacement Warhead: Deterrence Without Detonation
Mary Hood, Second Lieutenant US Air Force and 2020 Marshall Scholar at King's College London
The Criticality of Discourse in Determinations of Nuclear Arsenal Credibility under the CTBT
George Parkes, Performance and Effectiveness Assessment Analyst, MASS and
Joseph Campion, Mathematical Modeller, MASS
A Quantum 'State' of Mind. Threats Posed by Bose Einstein Condensate Gravity Sensors

1345 - 1400

Break

1400 – 1500

AWE-MoD Fireside Chat: The Transition of AWE from Contractor Operation to Non-Departmental Public Body

Chair: **Tom Plant**, UK PONI Director and Director of Proliferation and Nuclear Policy, RUSI

With: **Dominic Bethencourt-Smith**, Atomic Weapons Establishment
Ellen Jones, Defence Nuclear Organisation, UK Ministry of Defence
Clare Brown, UK Government Investments, UK Ministry of Defence.

1500 - 1530

Break

1530 - 1620

Panel Four: Hypersonics and Strategic Stability

Chair: [Alexandra Sticking](#), Research Fellow Space Policy and Security, RUSI

Speakers: **Daniel Cook**, Graduate Engineer, Lockheed Martin
Hypersonic Missile Defence, Detecting the Undetectable
 Contributors: Aaron Kennedy, Jonathan Roberts, Jonathan Balakumar
Timothy Wright, Research Analyst and Programme Administrator, IISS
Hypersonic Glide Vehicles and Implications for Crisis Stability: A Technical and Doctrinal Analysis

1620 - 1700

Break

1700 – 1800

Keynote Speech and Q&A

Chair: [David Jarvis](#), Associate Fellow, RUSI

Speaker: **Commodore Paul Dailey**, Deputy Director Submarine Capability, UK Ministry of Defence

Thursday 10 June 2021

1300 – 1415

Panel Five: Regional Deterrence Dynamics

Chair:

[Darya Dolzikova](#), Research Fellow, Proliferation and Nuclear Policy, RUSI

Speakers:

Rizwan Asghar, PhD Candidate, University of California Davis

Nuclear Weapons and Interstate Conflict Behaviour: Moderating Influence of Civil-Military Relations

Elisabeth Suh, PhD Fellow, Institute for Peace Studies and Security Policy University of Hamburg

Understanding Signals - The DPRK's Deterrence Posture

Tom Hickey, Project Assistant, UNIDIR

The Middle East WMD-Free Zone: Diplomatic Game of Pathways to Regional Stability?

1415 – 1430

Break

1430 – 1520

Panel Six: Future Nuclear Technologies

Chair:

Tom Plant, UK PONI Director and Director of Proliferation and Nuclear Policy, RUSI

Speakers:

Bhaumik Bhahmbhatt, Warhead Systems Engineer, Atomic Weapons Establishment
Is Thorium-based Nuclear Fuel Really Proliferation Proof?

Sam Brass, Graduate Engineer, Lockheed Martin

Nuclear Propulsion in the UK: Can the UK Accelerate Humans Towards Colonising Mars?

Contributors: Jacob Allen, Rebecca Desmond, Jennifer Edwards, Myles Johnson (Lockheed Martin) and Shyam Sikotra (Rolls Royce Submarines)

1520 – 1530

Break

1530 – 1730

Futures Exercise with N Square and the School of International Futures

Summary

This workshop with [N Square](#) and the [School of International Futures](#) will introduce participants to Futures Wheels, an exploratory futures tool, and how it can be applied to nuclear issues. This is a pilot of a participatory exercise that the School of International Futures hopes will be useful with other cross-sections of the nuclear community or networks of emerging leaders. It will also enrich the ongoing horizon scanning effort led by N Square.

Each of the ten groups will be assigned one of the N Square drivers of change, reinterpreted as a specific event in 2035. They will use a futures wheel to think through what this could mean by 2045; specifically, who would govern, own, or be at risk from nuclear weapons in that world.

About

N Square brings new energy and a fresh approach to tackling one of the world's wickedest problems: the deepening threat posed by nuclear weapons. The nuclear landscape is a jumble of many overlapping challenges, from

political dilemmas to technological puzzles to conflicts between belief systems. We recognize the complexities without being daunted by them, employing a range of tactics to create conditions that enable new solutions, ideas, and partnerships.

School of International Futures helps policy makers and business leaders improve the present and the future by using foresight and futures methods. We help build capacity to make strategic choices for the long term, to improve the quality of innovation, and ensure organisations are more resilient to emerging risks. We are headquartered in London but operate globally, using diverse teams to work with organisations and communities to make change for the better.