

# UK Project on Nuclear Issues 2016 Annual Conference

Thursday 02 June 2016

RUSI, 61 Whitehall, London SW1A 2ET

0830 Registration and Welcome Coffee

## 0900 The UK Nuclear Deterrent in 2016

Chair: **Professor Malcolm Chalmers**, Deputy Director-General, RUSI

Speaker: **Rt Hon Dr Julian Lewis MP**, Chair, House of Commons Defence Committee

**Emily Thornberry MP**, Shadow Secretary of State for Defence

**Brendan O'Hara MP**, Shadow SNP Westminster Group Leader (Defence)

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## 0950 British Nuclear Decision-Making

Chair: **Iain Coucher**, Chief Executive and Managing Director, AWE

Speakers: **Daniel Davies**, MA Graduate, King's College London  
*Brexit: The Nuclear Dimension*

**Maria Szczyglowska**, Safety Work Package Owner, Rolls-Royce  
*Big Projects, Big Challenges – Government Governance of the Successor Programme*

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1030 Morning Coffee

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## 1050 Panel Debate

Motion: *This House believes that the Obama administration's nuclear agenda has failed.*

Chair: **Dr Heather Williams**, MacArthur Postdoctoral Fellow, Centre for Science and Security Studies, King's College London

Speakers: **Professor Matthew Kroenig**, Associate Professor, Department of Government and School of Foreign Service, Georgetown University

**Dr Matthew Harries**, Research Fellow, IISS

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1150 **Assessing Obstacles to Nuclear Energy**

Chair: **Miranda Kirschel MBE**, Energy Advisory, EY

Speakers: **Katherine Bachner**, Non-Proliferation and National Security Department, Brookhaven National Laboratory  
*Societal acceptance of civilian nuclear programs and nuclear transparency*

**Shashi van de Graaff**, PhD Candidate, University of Queensland  
*Much Ado About Nothing? The Expectation and Reality of the Global Nuclear Renaissance*

**Anthony McGrath**, Controls Engineer – MUFC Design and R&T, Rolls-Royce  
*UK Nuclear Aspirations – Once More Into the Valley of Death?*

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1250 Lunch

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1345 **Lunch Keynote**

Chair: **Terry Macalister**, Energy Editor, The Guardian

Speakers: **Robert Davies**, CEO, Areva UK

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1415 **Developing Skills in Nuclear**

Chair: **Dr Fiona Rayment**, Chair, UK Nuclear Strategy Skills Group

Speakers: **Helen Blue**, Thermohydraulic Physicist, Rolls-Royce  
*Developing Engineers, not Jedi; why Yoda was mistaken*

**Illy Andrews**, Project Manager, Jacobs Engineering Ltd  
*The Skills Gap in the Nuclear Market*

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1505 **Who Needs Nuclear Weapons?**

Chair: **Professor William Walker**, Professor of International Relations, University of St Andrews

Speakers: **Colin Kendall**, Senior Operational Analyst, AWE  
*What did nuclear weapons ever do for us?*

**Karl Dewey**, CBRN Analyst, IHS Jane's, and **Alison Evans**, Senior Analyst in Country Risk, IHS Jane's  
*H-bombs and the Home Front: Implications of North's Korea's nuclear weapons in a Byungjin world*

**Zie Eun Yang**, PhD Candidate, SOAS  
*South Korea's Evolving Nuclear Strategy and the Controversy over Nuclear Sovereignty*

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1605 Afternoon Tea

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## 1625 Break-Out Session One

### *Challenges in Nuclear Incident Modelling*

*Writing Room*

Chair: **William P Hostyn**, Director, Advisory Committees & Programs Office, Defense Threat Reduction, U.S. Department of Defense

Speakers: **Jennifer Smith**, Assessment Officer, Ministry of Defence  
*Casualty Modelling Challenges*

**Jonathon Green**, Risk Consultant, AIR Worldwide  
*Modelling Nuclear Blasts and Radiological Devices for Insurance Purposes*

### *Addressing the Nuclear Waste Crisis*

*Reading Room*

Chair: **Professor Laurence Williams**, Chair, Committee on Radioactive Waste Management

Speakers: **Dr Matthew Gill**, Graduate Engineer, Energen/University of Manchester  
*Shortening the Lifetime of Nuclear Waste: How Long is Too Long Lived?*

**Colleen Mann**, Postgraduate Research Student, University of Sheffield  
*Can we store nuclear waste safely for 100,000 years?*

### *Cyber Dynamics in the Nuclear Field*

*Duke of Wellington Hall*

Chair: **Dr David Blagden**, Lecturer in International Security and Strategy, University of Exeter

Speakers: **Patrick Cirenza**, MPhil Student, University of Cambridge  
*The Flawed Nuclear Cyber Deterrence Analogy*

**Luke Wilkinson**, Senior Consultant, MASS  
*Cyber Vulnerabilities Associated with Foreign Nation Involvement in Nuclear Infrastructure Projects and Associated Mitigations*

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1715      **Break-Out Session Two**

**Additive Manufacturing and Non-Proliferation**

*Writing Room*

Chair:            **Ewan Lawson**, Senior Research Fellow, Military Sciences, RUSI

Speakers:      **Wyatt Hoffman**, Project Manager, Carnegie Endowment for International Peace  
*Evolution or Revolution? The Impact of Additive Manufacturing on Nuclear Proliferation*

**Amy Greaves**, Manufacturing Engineer, Rolls-Royce Submarines  
*Layer by Layer - Additive Manufacturing Exposed*

**Nuclear Fuel Banks**

*Reading Room*

Chair:            **Phil Ross**, Director, Collinson Grant

Speakers:      **Cristina Varriale**, MA Student, King's College London  
*The IAEA LEU Fuel Bank Impact on the NPT: Reinstating Inalienable Rights*

**Benjamin Pearce**, PhD Candidate, Imperial College London  
*Addressing the "Achilles' heel" of the NPT: Multilateral Approaches to Fuel Supply*

**New Tools in Arms Control Verification**

*Duke of Wellington Hall*

Chair:            **Anita Friedt**, Principal Deputy Assistant Secretary for Nuclear and Strategic Policy, Bureau of Arms Control, Verification and Compliance, U.S. Department of State

Speakers:      **Paul Beaumont**, PhD Candidate, Imperial College  
*Nuclear Arms Control: Optimising Verification Processes through Formal Modelling*

**Yan-Jie Schnellbach**, Research Associate, University of Liverpool  
*Reactor Monitoring with Anti-Neutrinos for Safeguards*

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1805      **Closing Remarks**

Speakers:      **Andrea Berger**, Director, UK PONI  
**Rebecca Hersman**, Director, U.S. PONI

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1815      Reception

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1915      Dinner

2000      **Dinner Keynote**

Chair:      **Dr Karin von Hippel**, Director-General, RUSI

Speaker:      **Jon Wolfsthal**, Special Assistant to the President and Senior Director for Arms Control and Nonproliferation, U.S. National Security Council

2100      End of Conference

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