Middlebury

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Conference

Silicon, Swords, and Ploughshares: The Perils and Promise of AI in the Nuclear and Biological Domains

8-9 APRIL, 2026 | **IN-PERSON CONFERENCE**

CNS
Asilomar AI & WMD Conference | 2026

Theme

How is AI reshaping the landscape of nuclear and biological weapons acquisition and potential use?

SESSIONS AND BREAKOUT GROUPS

- Defining the Evolving Risk Landscape
- AI and Escalation Dynamics
- Governance Options
- Means to Mitigate the Risks of State and Non-State Actors Using AI to Acquire Nuclear and Biological Weapons
- AI Tools for Nuclear Proliferation Forecasting and Risk Reduction
- Emerging Scholars/Practitioners Forum
- Biothreats and Preventive Measures
- International Perspectives
- Showcasing AI Tools

SPEAKERS

Berkeley Risk and Security Lab
Carnegie Endowment for International Peace
CNS
Council on Strategic Risks
Future of Life Institute
Georgia Institute of Technology
Google DeepMind
Goldman Sachs
GovAI
Institute for Security and Technology
Kings College London
Korea Institute of Nuclear Nonproliferation and Control
Lawrence Livermore National Laboratory
Nuclear Threat Initiative
OpenAI
Planet Labs
Sandia National Laboratories
Stanford University
Swiss Ministry of Foreign Affairs
Texas A&M University
UN Institute for Disarmament Research
University of Aberdeen
Vienna Center for Disarmament and Non-Proliferation
(*not an exhaustive list*)

ASILOMAR CONFERENCE GROUNDS
Pacific Grove, California

JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES
Middlebury Institute of International Studies at Monterey

This is a closed conference with sessions using the Chatham House Rule to encourage inclusive and open dialogue.

CNS Conference Agenda

Silicon, Swords, and Ploughshares:
The Perils and Promise of AI in the Nuclear and Biological Domains

DAY ONE (Wednesday, April 8, 2026)

8:00-8:55 AM**: Registration at the Entrance to the Chapel Auditorium (main conference hall)**

9:00-9:15 AM**: Welcome— Professor William Potter (CNS)**

9:15-10:45 AM: **SESSION ONE: Defining the Evolving Risk Landscape**

Opening Keynote on "How AI Is Redefining WMD Risks and Opportunities**"**
Mr. Robin Geiss, Director of the of the UN Institute for Disarmament Research

High Level Panel Discussion (Moderator: **Professor William Potter**)

Ms. Rebecca Hersman, Senior Fellow, GovAI and former Director of the Defense Threat Reduction Agency

Ms. Mallory Stewart, CEO of the Council on Strategic Risks and former Asst. Secretary of State

Dr. Filippa Lentzos, King's College London

Dr. Dimitri Kusnezov, Former Under-Secretary of Homeland Security for Science and Technology and recently Vice President of the Nuclear Threat Initiative

Key questions to address:

- What are the major risks AI has introduced with respect to acquisition of nuclear weapons and possible use by state actors? How have the technical barriers changed? What are some examples/use cases?
- Has AI had a comparable impact on the technical barriers inhibiting the ability of non-state actors to inflict nuclear violence, including with respect to attacks on or sabotage of nuclear facilities, acquisition on radiological dispersal devices, manufacture of crude nuclear explosives,

and precipitation of nuclear use by nuclear-armed states (e.g., by spoofing)? What are some examples/use cases?

- What are the major risks AI has introduced regarding acquisition of biological weapons by state and non-state actors? How have the technical barriers changed? What are some examples/use cases?
- What are potential arms control and national security applications of AI, including verification, simulating nuclear escalation and de-escalation dynamics, monitoring of proliferation developments, and nonproliferation pedagogy?

10:45-11:15 AM: **Break**

11:15 AM-12:15 PM: **SESSION TWO: Means to Mitigate the Risks of State and Non-State Actors Using AI to Acquire Nuclear and Biological Weapons** (Chapel)

High Level Panel Discussion

Moderator: **Mr. Hamza Chaudhry**, Future of Life Institute

Dr. Patricia Falcone, Associate Director for Science and Technology, Lawrence Livermore National Laboratory

Dr. Andrew Reddie, Director, Berkeley Risk and Security Lab

Mr. Richard Johnson, OpenAI and Former Deputy Assistant Secretary of Defense

Professor Herbert Lin, Stanford University

Key Questions to Address:

- What kinds of national and international governance mechanisms might mitigate risks in the nuclear and biological sector? What technical and political obstacles would need to be overcome?
- What is the potential for industry-led self-regulatory approaches in the nuclear and biological realms?
- How can one improve red teaming to mitigate the misapplication of AI in the nuclear and biological domains?

- Is it realistic to foster more ethical behavior in the use of AI in the global security landscape, and if so, how should one attempt to do so? Can one imagine the development of AI with a conscience?

12:15-1:15 PM: **Lunch in Crocker Dining Hall** (cafeteria service ends at 1pm!)

1:30-2:45 PM: **Continuation of Session Two on Mitigation Strategies** (Chapel)

Moderator: **Dr. Philipp Bleek**, MIIS

Mr. Reto Wollenman, Swiss Ministry of Foreign Affairs

Dr. Sarah Case-Lackner, Vienna Center for Disarmament and Non-Proliferation

Dr. Ian Stewart, CNS

Dr. Paige Kunkle, Google DeepMind

3:00-3:45 PM: **SESSION THREE: AI and WMD Roundtable Conversation** (Chapel)

Moderator: Dr. Allison Stanger, CNS/Middlebury

Mr. Will Marshall, Co-Founder and CEO of Planet Labs

Mr. George Lee, Goldman Sachs

Dr. Jeffrey Lewis, CNS/Middlebury

3:45-4:15 PM: **Break**

4:15-5:30 PM: **Breakout Sessions** with focus on the specific topics noted below and continuation of discussions from plenary in smaller groups; if time permits, also discuss possible globally applicable guiding principles/best practices regarding AI and the nuclear and bio landscape.

Breakout Group 1 (Scripps Meeting Room): Discussion on AI tools for nuclear proliferation forecasting and risk reduction.

Moderator: **Dr. Jeffrey Knopf**, Middlebury Institute of International Studies at Monterey.

Dr. Chansuh Lee, Director of Nuclear Export Control Division, Korea Institute of Nuclear Nonproliferation and Control

Dr. Mansung Yim, Texas A&M

Dr. Dimitri Kusnezov, NTI, Agentic AI real-time risk observatory

Mr. Sam Lair, CNS

Breakout Group 2 (Surf & Sand Meeting Room): Biothreats and preventive measures (Discussion led by **Dr. Allison Berke**, CNS)

Breakout Group 3 (Chapel Auditorium): Governance Options (Discussion led by **Mr. Reto Wollenman**, Swiss MFA and **Dr. Allison Stanger**, CNS/Middlebury)

5:45-6:45 PM: **Dinner in Crocker Dining Hall**

7:00-9:00 PM: **Bonfire Reception/Mixer** at the Fire Pit with Remarks by **Dr. Siegfried Hecker,** CNS/Texas A&M)

DAY TWO (Thursday, April 9, 2026)

9:00-9:45 AM: **Plenary Session** (Chapel Auditorium): Reports from discussion leaders of Breakout Sessions

9:45-11:00 AM: **SESSION FOUR: AI and Escalation Dynamics** (Chapel Auditorium)

Moderator: **Dr. Sarah Bidgood**, IGCC and Georgia Tech

Dr. Stephen Herzog, CNS

Dr. James Acton, Carnegie Endowment for International Peace

Dr. James Johnson, University of Aberdeen

11:15 AM-12:15 PM: **Breakout Groups**

Breakout Group 1 (Chapel Auditorium): International Perspectives

Moderator: **Mr. Jean du Preez**, CNS

Ms. **Sylvia Mishra**, Institute for Security and Technology (South Asia)

Mr. Graham Webster, CISAC, Stanford (China)

Ms. Rose Gottemoeller, CISAC, Stanford (Europe/Russia)

Breakout Group 2 (Surf & Sand Meeting Room): Emerging Scholars/Practitioners Forum (Dedicated space for students and early career professionals)

Moderators: **Jake Lopata** (CNS) and **Aman Sheoran** (CNS)

Dr. Felippa Lentzos, King's College London

Dr. Sarah Bidgood, IGCC and Georgia Tech

Breakout Group 3 (Scripps Meeting Room): Showcasing AI Tools

Moderator: **Ms. Jessica Varnum,** CNS

Ms. Qiqi Chen, CNS and **Yanliang Pan,** CNS (NPT Simulation)

Ms. Selena Sun, Stanford ("AI Proliferation Detection")

12:15-1:15 PM: **Lunch in Crocker Dining Hall** (cafeteria service ends at 1pm!)

2:00-4:00 PM: **SESSION FIVE: Charting the Path Forward** (Chapel Auditorium)

Moderator: **Professor William Potter**

Dr. Douglas Shaw, Independent consultant

Dr. Zoe Gastelum, Sandia

Dr. Allison Berke, CNS

Mr. Yanliang Pan, CNS

Dr. Stephen Herzog, CNS

- Identification of critical knowledge gaps and research priorities (Mr. Yanliang Pan)
- Concrete proposals for AI governance mechanisms in the bio domain (Dr. Allison Berke)
- Concrete proposals for AI governance in the nuclear domain (Dr. Stephen Herzog)
- Consideration of Guiding Principles: Past (Dr. Zoe Gastelum), Future (Dr. Douglas Shaw)