

EVENT SCHEDULE

AI For National Competitiveness Expo May 7th

Speakers:

10:15 - 10:55	Accelerating Scientific Discoveries with Real-Time Intelligent Sensing Nhan Tran – FNAL
12:45 - 1:25	AI Applications for Nuclear Energy Chris Ritter – INL
1:30 - 2:10	Advancing Frontiers in AI for Science Valerie Taylor and Venkat Vishwanath - ANL
2:15 - 2:55	The National Scientific AI Landscape: Transforming National Science and Security with AI Brian Spears – LLNL
3:00 - 3:40	Evaluating a Credibility Technical Basis Towards Trusted AI for High Consequence Applications Erin Acquesta – SNL
3:45 - 4:25	Using the Wafer Scale Engine for High-Performance Scientific Computing Dirk Van Essendelf – NETL
4:30 - 5:10	Advancing Secure, Trustworthy, and Energy-Efficient AI for Science and National Security Prasana Balaprakash – ORNL
5:15 - 5:55	Addressing Scientific Data Bias and Systematic Difference via Unsupervised Domain Mapping Yihui Ren – BNL

May 8th

Speakers:

12:00 - 12:40	High-Performance Computing Energy Efficiency Wes Brewer and Woong Shin – ORNL
12:45 - 1:25	AI-Driven Breakthroughs in Energy Systems from Vision to Design Justin Weber – NETL
1:30 - 2:10	Re-imagining the Search for Fundamental Interactions with AI Ben Nachman – LBNL
2:15 - 2:55	Exascale Computing, AI, and Achieving the Floating Offshore Wind Energy EarthShot Mike Sprague – NREL
3:00 - 3:40	Foundation AI Models for Biosecurity Research Bin Hu – LANL
3:45 - 4:25	Research at the Frontiers of AI for Science, Security, and Technology Court Corley – PNNL
4:30 - 5:10	AI for Scientific Discovery, Synthesis, and Manufacturing Jamie Morris – AMES
5:15 - 5:55	Using AI to Improve Infrastructure Permitting and Environmental Reviews Keith Benes – DOE Office of Policy

Catch DOE speakers at the Expo:

5/7 10:00-10:30am, Room 202B

5/7 10:30am-12pm, Room 202B

5/7 12:30-12:45pm, Center Stage

5/7 2:20-3:10pm, Carter Exchange

5/8 3:00-4:00pm, Room 207A

Achieving Fusion Ignition: How the U.S. National Labs Power the Next Generation of Advanced Technologies; Dr. Kim Budil, Director of Lawrence Livermore National Laboratory
Fusion Energy: Unlocking the Path Forward; Scott Hsu, DOE Lead Fusion Coordinator
Advancing New Frontiers: How the DOE is Driving AI for Science, Energy, and Security; David Turk, DOE Deputy Secretary
The Future of Advanced Research, Dr. Evelyn Wang, Director of ARPA-E
Shooting for the Stars: Unleashing American Innovation through USG Moonshot Missions; Dr. Geri Richmond, DOE Under Secretary for Science and Innovation



ai expo
for national competitiveness

24



Demos:

10:00 - 2:00	Sidekick System: A Self-Driving Laboratory Development Environment Abhik Sarkar – LLNL
2:00 - 3:00	Generative AI to Improve Environmental Review and Permitting Outcomes and Efficiency Robert Rallo - PNNL
3:00 - 4:00	HydraGNN: A Scalable Graph Neural Network Architecture for Accelerated Material Discovery and Design Max Lupo Pasini – ORNL
4:00 - 5:00	Scaling Large Language Models to Understand Protein-Protein Interactions Valerie Taylor and Venkat Vishwanath - ANL
5:00 - 6:00	AI and Microelectronics in Extreme Environments Javier Campos – FNAL

Virtual Reality - May 7th and 8th:

12:00 - 6:00	JARVIS: Interacting with LLMs in Virtual Reality Danny Gomez – SNL
12:00 - 6:00	A Collaborative Environment for Analysis of Digital Twins in Additive Manufacturing Haichao Miao – LLNL

Demos:

10:00 - 1:00	Sidekick System: A Self-Driving Laboratory Development Environment Abhik Sarkar – LLNL
1:00 - 2:00	Interconnected Science Ecosystem (INTERSECT) for Scientific Workflows that Connect AI/ML, M&S, and Experimental Instruments Ben Mintz – ORNL
2:00 - 3:00	Energy Data eXchange® (EDX): A Data Curation and Collaboration Test Bed for Carbon Management R&D Kelly Rose – NETL
3:00 - 4:00	Quantum Many Body Physics using AI Valerie Taylor and Venkat Vishwanath - ANL
4:00 - 5:00	Try to Fool the AI System: Machine Assisted Anomaly Detection System (MAADS) Anthony Garland and Kevin Potter – SNL
5:00 - 6:00	Nuclear Reactor Digital Twin: Real-time Proliferation Detection with AI/ML Kolton Heaps – INL