

IFNEC WEBINAR

AI FOR NUCLEAR & VIRTUAL TOUR OF THE DEMONSTRATION OF MICROREACTOR EXPERIMENTS (DOME) AT INL

24 July 2025**16:00 – 17:00 CEST (Paris time) / 10:00 – 11:00 ET (Eastern time)****[Registration link](#)**

Artificial Intelligence (AI) is rapidly emerging as a transformative force in the nuclear sector, offering powerful tools to enhance safety, efficiency, and innovation. This upcoming webinar, hosted by the International Framework for Nuclear Energy Cooperation (IFNEC), will explore how AI is being integrated into nuclear technologies — specifically, its role in supporting the validation of the world’s first microreactor testbed.

This session will offer a unique opportunity for professionals and enthusiasts from both the nuclear and AI communities to gain expert insights. A featured presentation by a leading authority in the field will be followed by a virtual tour of the Demonstration of Microreactor Experiments (DOME) facility.

In addition, the webinar will provide key logistical and preparatory information for the upcoming IFNEC Advanced Reactors and Risk Communication Workshop, scheduled for October 6–9, 2025, at the Idaho National Laboratory (INL).



WEBINAR PROGRAMME



16:00 – 16:05 | Opening Remarks

- Ms Aleshia DUNCAN, IFNEC Chair

16:05 – 16:20 | Presentation on AI in Nuclear

- Mr Chris RITTER, Division Director, Scientific Computing & AI, US Idaho National Laboratory

16:20 – 16:35 | Virtual tour of NRIC's Demonstration of Microreactor Experiments (DOME)

- Mr Curtis NIELSON, Technical Program Manager, DOME, National Reactor Innovation Center

16:35 – 16:45 | Q&A Session

16:45 – 16:55 | INL workshop logistics

- Ms Seoyeong JEONG, Multilateral Initiatives Project Manager, OECD Nuclear Energy Agency (NEA)

16:55 – 17:00 | Closing Remarks

- Ms Aleshia DUNCAN, IFNEC Chair

SPEAKERS



Chris Ritter is the division director of scientific computing & AI and director of the Digital Innovation Center of Excellence at Idaho National Laboratory (INL). His team of ~100 computational and data scientists are changing the world's future with AI/ML, digital twinning, digital engineering, multi-physics, HPC, and digital thread technologies across a portfolio of nuclear energy, non-proliferation, semiconductor, and defense applications. Chris founded INL's nationally leading digital engineering

team which grew from 0 to over ~57 of the nation's top researchers and developers in digital science. His team led the first nuclear reactor digital twin, built the Deep Lynx open digital thread platform, developed the first autonomous non-nuclear microreactor, and is actively building multiple petabyte-scale digital thread platforms. Additionally, he is Chief Digital Officer of SMART USA, a ~\$1B Institute focused on semiconductor digital twins. Prior to INL, Chris co-founded and led development of the #1 cloud-native MBSE tool, Innoslate, used in 107 countries across 2,000 companies around the world.



Curtis Nielsen currently serves NRIC as a technical program manager responsible for NRIC's DOME ecosystem Program Manager as well as helping NRIC with new and irradiated fuel management and ensuring timely and efficient delivery of Demonstration of Microreactor Experiment (DOME) projects that support the next generation of advanced reactors. Prior to NRIC, Curtis worked 16 years at the Naval Reactors Facility in Spent Fuel Packaging and Storage, and Program Management.