

W12 Future-Focused Research“What Will We Think of Next?

This session will showcase the Office of Nuclear Regulatory Research (RES) Future Focused Research (FFR) Program. The FFR is a modest program initiated in FY2020 to help the NRC prepare for technology advancements in nuclear-related applications. A brief introduction of the program’s purpose and its proposal submittal and evaluation processes will be provided by the RES Office Director. A presentation by the Principal Investigators of five of the eighteen total research projects will include each project’s purpose, status, and summary of current research results. The five representative research projects include two from the first year of the FFR program (FY2020), one from the program’s second year (FY2021), and two from the FY2022 group of projects just initiated. The presentations will include slides and discussions of current research results, insights of how the FFR projects relate to NRC interests, known technical knowledge gaps, and regulatory needs.

SESSION CHAIR(S):

- Ray Furstenau, Director, Office of Nuclear Regulatory Research, NRC/NRC e-mail: Ray.Furstenau@nrc.gov

SPEAKER(S):

- Introductory Remarks
[Ray Furstenau](#), Director, Office of Nuclear Regulatory Research, NRC
- [Digital Twins “ Regulatory Viability Video](#)
[Digital Twin Project Team](#), Reactor Engineering Branch, Division of Engineering, RES/NRC, Idaho National Laboratory, and Oak Ridge National Laboratory
- [Licensing Modernization Project for Operating Reactors](#)
[Matthew Humberstone](#), Senior Reliability Engineer, Performance and Reliability Branch, Division of Risk Analysis, RES/NRC
- [Drones and Virtual Reality Tools to Analyze Radiological Surveys in Decommissioning](#)

[Stephanie Bush-Goddard](#), Senior Health Physicist, Radiation Protection Branch, Division of Systems Analysis, RES/NRC

- [Review of Advanced Manufacturing Technologies \(AMTs\) for Fusion Reactor Materials](#)

[Amy Hull](#), Senior Materials Engineer, Materials Engineering Branch, Division of Engineering, RES/NRC and [Shah Malik](#), Senior Materials Engineer, Materials Engineering Branch, Division of Engineering, RES/NRC

- [A Zero Trust Paradigm for Cyber Security in New Reactors](#)

[Anya Kim](#), Computer Scientist, Instrumentation Controls & Electrical Engineering Branch, Division of Engineering, RES/NRC and [Kim Larson-Jenkins](#), IT Specialist (Cyber), Cyber Security Branch, Division of Physical and Cyber Security Policy, NSIR/NRC

SESSION COORDINATOR(S):

- James Steckel, Program Manager, Regulatory Guide and Programs Management Branch, Division of Engineering, RES/NRC e-mail: James.Steckel@nrc.gov