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2024 SCALE Users' Group Workshop Wednesday–Friday, June 5–7, 2024 Oak Ridge National Laboratory (Hybrid Meeting)

Bonus: 11 virtual tutorials are offered May 31 and June 3–4 to all workshop registrants who have a SCALE license as required by the tutorials. Participation to these tutorials is unlimited for qualified registrants.

Agenda as of 7/17/2024

Event contact	Germina Ilas ilasg@ornl.gov Will Wieselquist wieselquiswa@ornl.gov	
Event/Time		
Wednesday, June 5, 2024, 8:00 am–12:00 pm (Eastern Daylight Time)		
Hybrid Tutorials (Zoom Call-in Option) Building 5100, Rm. 128 <ul style="list-style-type: none"> • 8:00–9:50 am - How to Build and Install SCALE (Shane Hart and Rob Lefebvre ORNL) • 10:00–11:50 am - Activation Analysis with ORIGEN/MAVRIC for Advanced Reactors (Cihangir Celik and Steve Skutnik, ORNL) 	SCALE 1x1 In-Person Sessions 5100, Rm. 130 No registration required.	
Lunch Break (12:00–1:00 pm)		
Event/Time		Moderator/Presenter
1:00–4:10 pm (Eastern Daylight Time) Hybrid Technical Session, Building 5100, Room 128 (Zoom Call-in Option)		
Introductions/Welcome (1:00–1:10 pm)		Dave Pointer (ORNL)
Technical Session (1:10–3:00 pm) Special Session - Invited Talks <ul style="list-style-type: none"> • Extending the Validation Range for Decay Heat Measurements (Akkurt) • NRC Regulatory Applications with SCALE (Kyriazidis) • MELCOR and Nuclear Energy Safety Frontiers (Luxat) • Analytical Methods for Microreactor Development at X-energy (Rearden) • Incorrect Resonance Escape Probabilities and How to Fix Them with SCALE (Sobes) 		Hatice Akkurt (Electric Power Research Institute) Lucas Kyriazidis (U.S. Nuclear Regulatory Commission [NRC]) Dave Luxat (Sandia National Laboratories) Brad Rearden (X-energy) Vlad Sobes (University of Tennessee, Knoxville [UT-K])

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Event /Time	Moderator/Presenter
Break (3:00–3:10 pm)	
Technical Session (3:10–4:10 pm) SCALE Team Highlights <ul style="list-style-type: none"> • What's New in SCALE 6.3.2 (Hart) • Improvements to ORANGE Performance in SCALE 7.0 (Ghaddar) • Capability Enhancements to Support Nuclear Criticality Safety Analysis (Bekar) • Non-LWR Analysis and Capability Enhancement for NRC Readiness Support - Status and Plans (Bostelmann) 	Kursat Bekar (ORNL) Rike Bostelmann (ORNL) Tarek Ghaddar (ORNL) Shane Hart (ORNL)
Tour: High Flux Isotope Reactor (4:15–5:45 pm) Registration required.	Matthias Frontzek

Event /Time	Moderator/Presenter
Thursday, June 6, 2024, 8:00 am–3:10 pm (Eastern Daylight Time) Building 5100, Rm. 128 (Zoom Call-in Option)	
Hybrid Tutorial (8:00–9:50 am) New Sensitivity Features and More in Sampler	Ugur Mertuyrek (ORNL) Rike Bostelmann (ORNL)
Technical Session (10:00 am–12:00 pm) SCALE Open Mic <ul style="list-style-type: none"> • ORIGEN and Isotope Production at ORNL (Power) • Sample-Decay-Dose (Chvala) • The Safety Analysis of the Sunken Komsomolets in the Norwegian Sea (Syed) • Modeling the Sourdough Fuel Cycle in the EIRENE Molten Salt Reactor with SCALE (Moss) • Designing a Critical Experiment for Advanced Reactor Implementation (Gibson) 	Ondrej Chvala (University of Texas, Austin) Claire Gibson (UT-K) C. Erika Moss (UT-K) Grace Power (ORNL) Naeem Ul Hasan Syed (Norwegian Radiation and Nuclear Safety Authority, Norway)

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Event /Time	Moderator/Presenter
<p>Working Lunch (12:00–1:00 pm) <u>What is new in SCALE - Sneak Peek at Upcoming Features</u></p> <ul style="list-style-type: none"> • New Energy Deposition, Photonuclear Physics, and CAAS Capabilities in MAVRIC - SCALE 7.0 (Celik) • Emerging Visualization and Utility Capabilities for Fulcrum (Skutnik) • New Target Search Capabilities in SAMPLER (Mertyurek) • Photonuclear Data in SCALE 7.0 (McDonnell) 	<p>Cihangir Celik (ORNL) Steve Skutnik (ORNL) Ugur Mertyurek (ORNL) Jordan McDonnell (ORNL)</p>
<p>Tour: Irradiated Fuels Examination Laboratory (1:00–2:00 pm) Registration required.</p>	<p>Jason Harp</p>
<p>Technical Session (2:00–3:00 pm) <u>SCALE Open Mic</u></p> <ul style="list-style-type: none"> • Equilibrium Temperature Sensitivity in the HTR-10 (Berens) • Multi-laminate Shielding Applied to a Hypothetical Small Modular Reactor (Fiel) • Exploring the Impact of Modeling Fidelity on Spent Fuel Characteristics for High Temperature Gas-Cooled Reactors (Wing) 	<p>Annie Berens (UT-K) João Claudio Batista Fiel (IME, Brazil) Jonathan Wing (UT-K)</p>
<p>Break (3:00–3:10 pm)</p>	
<p>Technical Session (3:10–4:30 pm) <u>Best Practices for SCALE Modeling & Simulation</u></p> <ul style="list-style-type: none"> • SLICE Method for Inventory Generation of PBR Equilibrium Cores (Bostelmann) • SCALE Tools for Criticality Safety Validation (Shaw) • ORIGEN Sensitivity for Nuclide Inventory (Jeon) 	<p>Rike Bostelmann (ORNL) Alex Shaw (ORNL) BK Jeon (ORNL)</p>

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Event /Time	Moderator/Presenter
Friday, June 7, 2024, 8:00 am–11:10 pm (Eastern Daylight Time) Hybrid Technical Sessions, Building 5100, Room 128 (Zoom Call-in Option)	
Technical Session (8:00–10:00 am) <u>Best SCALE Model Contest</u>	Annie Berens (UT-K) Cihangir Celik (ORNL) Mathieu Dupont (ORNL) Rabab Elzohery (ORNL) Donny Hartanto (ORNL) C, Erika Moss (UT-K) Georgeta Radulescu (ORNL) Naeem Ul Hasan Syed (Norwegian Radiation and Nuclear Safety Authority, Norway) Jonathan Wing (UT-K)
Break (10:00–10:10 am)	
Closing Session (10:10 am–11:10 am)	Will Wieselquist (ORNL) Germina Ilas (ORNL)
Tour: Graphite Reactor (11:10 am–12:10 pm) Registration required.	

BONUS VIRTUAL TUTORIALS

Event /Time	Moderator/Presenter
Friday, May 31, 2024, 8:00 am–3:50 pm (Eastern Daylight Time) via Microsoft Teams	
Tutorial Session (8:00–9:50 am) Frequent Fulcrum Functions: The Basics of SCALE's Graphical User Interface	Rob Lefebvre (ORNL) Steve Skutnik (ORNL)
Tutorial Session (10:00–11:50 am) LWR Decay Heat Analysis with SCALE	Germina Ilas (ORNL) BK Jeon (ORNL)
Tutorial Session (12:00–1:50 pm) Obiwan from A to Z	Steve Skutnik (ORNL) Donny Hartanto (ORNL)

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Event /Time	Moderator/Presenter
Friday, May 31, 2024, 8:00 am–3:50 pm (Eastern Daylight Time) via Microsoft Teams	
Tutorial Session (2:00–3:50 pm) ORIGEN Library Generation with TRITON	Steve Skutnik (ORNL) Briana Hiscox (ORNL)

Event /Time	Moderator/Presenter
Monday, June 3, 2024, 8:00 am–3:50 pm (Eastern Daylight Time) via Microsoft Teams	
Tutorial Session (8:00–9:50 am) Fulcrum Data and Geometry Visualization	Rob Lefebvre (ORNL) Steve Skutnik (ORNL)
Tutorial Session (10:00–11:50 am) SCALE Sensitivity	Jordan McDonnell (ORNL) Alex Shaw (ORNL)
Tutorial Session (12:00–1:50 pm) SCALE Utilities for Nuclear Data Interrogation, Comparison, and Visualization	Jesse Brown (ORNL) Jordan McDonnell (ORNL)
Tutorial Session (2:00–3:50 pm) Polaris Lattice Physics Modeling for ATF Designs	Matt Jessee (ORNL) Ugur Mertuyrek (ORNL)

Event /Time	Moderator/Presenter
Tuesday, June 4, 2024, 8:00 am–1:50 pm (Eastern Daylight Time) via Microsoft Teams	
Tutorial Session (8:00–9:50 am) Molten Salt Reactor Analysis with SCALE	Donny Hartanto (ORNL) Rike Bostelmann (ORNL)
Tutorial Session (10:00–11:50am) New Sensitivity Capability in ORIGEN	BK Jeon (ORNL) Germina Ilas (ORNL)
Tutorial Session (12:00–1:50 pm) SCALE Modelling & Simulations for Source Terms in Spent Nuclear Fuel	Germina Ilas (ORNL) Shane Hart (ORNL)