

2022 Hybrid SCALE Users' Group Workshop Wednesday–Friday, April 27–29, 2022 Oak Ridge National Laboratory

Agenda as of 4/28/2022

Event contact	Germina Ilas ilasg@ornl.gov Will Wieselquist wieselquistwa@ornl.gov	
Event /Time	Lead/Moderator	
Wednesday, April 27, 2022, 8:00 am–12:00 pm (Eastern Daylight Time) Virtual Tutorials via Microsoft Teams		
Tutorial Session [8:00–9:50 am] <u>Frequent Fulcrum Functions: The Basics of SCALE's Graphical User Interface</u>	Rob Lefebvre (ORNL) Shane Hart (ORNL)	
Tutorial Session [8:00–9:50 am] <u>LWR Decay Heat Analysis with SCALE</u>	Germina Ilas (ORNL) Joseph Burns (ORNL)	
Tutorial Session [8:00–9:50 am] <u>ORIGEN Library Generation with TRITON</u>	Steve Skutnik (ORNL) Briana Hiscox (ORNL)	
Tutorial Session [8:00–9:50 am] <u>SCALE Utilities for Nuclear Data Interrogation, Comparison, and Visualization</u>	Doro Wiarda (ORNL) Rike Bostelmann (ORNL) Shane Hart (ORNL)	
Tutorial Session [10:00 am–12:00 pm] <u>Activation Analysis with ORIGEN/MAVRIC for Advanced Reactors</u>	Cihangir Celik (ORNL) Steve Skutnik (ORNL)	
Tutorial Session [10:00 am–12:00 pm] <u>Polaris Lattice Physics Modeling for ATF Designs</u>	Matt Jessee (ORNL) Ugur Mertuyurek (ORNL)	
Tutorial Session (10:00 am–12:00 pm) <u>SCALE Modelling & Simulations for Source Terms in Spent Nuclear Fuel</u>	Germina Ilas (ORNL) Shane Hart (ORNL)	
Tutorial Session [10:00 am–12:00 pm] <u>SCALE Sensitivity</u>	Jordan McDonnell (ORNL) Will Wieselquist (ORNL)	
Lunch Break [12:00–1:00 pm]		

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Event /Time	Lead/Moderator
Wednesday, April 27, 2022, 1:00–3:00 pm (Eastern Daylight Time) Hybrid Technical Session, Building 5100, Room 128 (Zoom Call-in Option)	
Introductions/Welcome [1:00–1:10 pm]	Jeremy Busby (ORNL) Germina Ilas (ORNL)
Technical Session [1:10 –3:00 pm] <u>Best Practices for SCALE Modeling & Simulation</u> <ul style="list-style-type: none"> • Reactor Pressure Vessel Shielding Analysis (Alpan) • Using the Criticality Accident Alarm System Modeling Capabilities in SCALE (Dupont) • Polaris Depletion Calculations: Selected Best Practices (Kucinski) • Sensitivity/Uncertainty Analysis for Nuclear Criticality Safety Validation (Marshall) • Illustration of Neutronic Decoupling in Fresh Fuel Storage Environments (Shaw) 	Arzu Alpan (ORNL) Mathieu Dupont (ORNL) Nicholas Kucinski (ORNL) B.J. Marshall (ORNL) Alex Shaw (ORNL)
Break [3:00–3:10 pm]	
Wednesday, April 27, 2022, 3:10–5:00 pm (Eastern Daylight Time) In-Person only Tutorials	
Tutorial Session [3:10–5:00 pm] Building 5100, Room 140 <u>VADER for Criticality Safety Validation</u>	B. J. Marshall (ORNL) Shane Hart (ORNL)
Tutorial Session [3:10–5:00 pm] Building 5700, Room 5700, O304 <u>New Sensitivity Metrics in Sampler</u>	Ugur Mertuyrek (ORNL) Rike Bostelmann (ORNL)

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Event /Time	Lead/Moderator
<p>Thursday, April 28, 2022, 8:00 am–12:00 pm (Eastern Daylight Time) Hybrid Technical Sessions, Building 5100, Room 128 (Zoom Call-in Option)</p>	
<p>Technical Session [8:00–10:00 am] <u>SCALE Team Highlights</u></p> <ul style="list-style-type: none"> • SCALE 6.3 (Wieselquist) • Impacts of LEU+ and ATF on Fresh Fuel Storage Criticality Safety (Shaw) • HALEU/HBU/ATF Reactor Physics (Mertyurek) • Calculation of Spent Fuel Pool Time-to-Boil using Polaris/ORIGAMI (Kucinski) • MSR Reactivity, Power, and Source Term Simulations with SCALE (Bostelmann) • Criticality and Radiation Shielding Impact of ENDF/B-VIII (Marshall/Celik) • Flowing-Pebble Depletion Modeling in ORIGAMI (Skutnik) 	<p>Will Wieselquist (ORNL) Alex Shaw (ORNL) Ugur Mertyurek (ORNL) Nicholas Kucinski (ORNL) Rike Bostelmann (ORNL) B.J. Marshall (ORNL) Cihangir Celik (ORNL) Steve Skutnik (ORNL)</p>
<p>Break [10:00–10:10 am]</p>	
<p>Technical Session [10:10 am–12:00 pm] <u>Special Session (Invited Talks)</u></p> <ul style="list-style-type: none"> • UPM Activities in the Framework of SANDA Project using SCALE System (Cabellos) • NRC Neutronics Regulatory Applications & SCALE Code Development (Esmaili) • Predicting the Bias of SNF Depletion Calculations: Application of Polaris, Sampler, and Machine Learning (Shama) • SCALE use at BWXT (Wetzel) 	<p>Oscar Cabellos (Universidad Politécnica de Madrid [UPM], Spain) Hossein Esmaili (US Nuclear Regulatory Commission) Ahmed Shama (National Cooperative for the Disposal of Radioactive Waste [NAGRA], Switzerland) Larry Wetzel (BWXT Technologies, Inc.[BWXT])</p>
<p>Working Lunch [12:00–1:00 pm] <u>Spatially Dependent Resonance Self-Shielding Capability for Non-Uniform Temperature Profile In SCALE-6.3 XSPROC-BONAMI</u></p>	<p>Kang Seog Kim (ORNL)</p>

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Event /Time	Lead/Moderator
<p>Thursday, April 28, 2022, 1:00–3:00 pm (Eastern Daylight Time) Hybrid Technical Session, Building 5100, Room 128 (Zoom Call-in Option)</p>	
<p>Technical Session [1:00–3:00 pm] SCALE Open Mic</p> <ul style="list-style-type: none"> • MUSIC: a UPM tool for cross-sections generation and uncertainty propagation. (Durán-Vinuesa) • Parameterization of Macroscopic Cross Section for PWR Reactors in Burn-up Cycles (Fiel) • May I ... average the characteristics of a spent nuclear fuel assembly stockpile in source term evaluations? (Govers) • Cross section generation with Polaris and SAMPLER for LWR modeling (Rouxelin) • MOAA: MCNP to ORIGEN-S Activation Automation tool (Carter) 	<p>Austin Carter (Idaho National Laboratory) Luis Felipe Durán-Vinuesa (UPM, Spain) João Claudio Fiel (Military Institute of Engineering, Brazil) Kevin Govers (Federal Agency for Nuclear Control [FANC], Belgium) Pascal Rouxelin (North Carolina State University)</p>
<p>Break [3:00–3:10 pm]</p>	
<p>Thursday, April 28, 2022, 3:10–5:00 pm (Eastern Daylight Time) In-Person only Tutorials</p>	
<p>Tutorial Session [3:10–5:00 pm] Building 5100, Room 140 Nodal Data with TRITON/Shift</p>	<p>Rike Bostelmann (ORNL) Brian Ade (ORNL)</p>
<p>Tutorial Session [3:10–5:00 pm] Building 5700, Room O304 Molten Salt Reactor Analysis with SCALE</p>	<p>Ben Betzler (ORNL) Donny Hartanto (ORNL)</p>

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Event /Time	Lead/Moderator
Friday, April 29, 2022, 8:00 am–12:00 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> <ul style="list-style-type: none"> • Arzu Alpan (ORNL) • Ben Betzler (ORNL) • Rike Bostelmann (ORNL) • Mathieu Dupont (ORNL) • Kevin Govers (FANC) • B.J. Marshall (ORNL) • Georgeta Radulescu (ORNL) • Alex Shaw (ORNL) • Will Wieselquist (ORNL) • Hafssa Ziani (Abdelmalek Essaadi University) 	Arzu Alpan (ORNL) Ben Betzler (ORNL) Rike Bostelmann (ORNL) Mathieu Dupont (ORNL) Kevin Govers (FANC, Belgium) B.J. Marshall (ORNL) Georgeta Radulescu (ORNL) Alex Shaw (ORNL) Will Wieselquist (ORNL) Hafssa Ziani (Abdelmalek Essaadi University, Morocco)
Break [10:00–10:10 am]	
Closing Session [10:10 am–12:00 pm]	Will Wieselquist (ORNL) Germina Iilas (ORNL)