

2023 SCALE Users' Group Workshop Wednesday–Friday, April 26–28, 2023 Oak Ridge National Laboratory (hybrid meeting)

Agenda as of 4/24/2023

Event contact	Germina Ilas ilasg@ornl.gov Will Wieselquist wieselquistwa@ornl.gov	
]Event /Time	Moderator/Presenter	
Wednesday, April 26, 2023, 8:00 am–12:00 pm (Eastern Daylight Time) Virtual Tutorials via Microsoft Teams		
Tutorial Session [8:00–9:50 am] Frequent Fulcrum Functions: The Basics of SCALE's Graphical User Interface	Rob Lefebvre (ORNL) Shane Hart (ORNL)	
Tutorial Session [8:00–9:50 am] LWR Decay Heat Analysis with SCALE	Germina Ilas (ORNL) Bk Jeon (ORNL)	
Tutorial Session [8:00–9:50 am] ORIGEN Library Generation with TRITON	Steve Skutnik (ORNL) Briana Hiscox (ORNL)	
Tutorial Session [8:00–9:50 am] SCALE Utilities for Nuclear Data Interrogation, Comparison, and Visualization	Jesse Brown (ORNL) Jordan McDonnell (ORNL)	
Tutorial Session [10:00 am–12:00 pm] Activation Analysis with ORIGEN/MAVRIC for Advanced Reactors	Cihangir Celik (ORNL) Steve Skutnik (ORNL)	
Tutorial Session (10:00 am–12:00 pm] SCALE Modelling & Simulations for Source Terms in Spent Nuclear Fuel	Germina Ilas (ORNL) Shane Hart (ORNL)	
Tutorial Session [10:00 am–12:00 pm] SCALE Sensitivity	Jordan McDonnell (ORNL) Will Wieselquist (ORNL)	
Lunch Break [12:00–1:00 pm]		

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Event /Time	Moderator/Presenter
Wednesday, April 26, 2023, 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]	Dave Pointer (ORNL) Germina Ilas (ORNL)
Technical Session [1:10–3:00 pm] <u>SCALE Team Highlights</u> <ul style="list-style-type: none"> • ENDF-VIII.1 and AMPX (Brown/McDonnell) • HALEU/HBU/ATF Reactor Physics (Updates) (Mertyurek) • SCALE and NCSP (Bekar/Wieselquist) • Validating Actinides and Fission Products for Burnup Credit Criticality Safety Analyses – Nuclide Compositions Prediction with Extended Validation Basis, NUREG-7108 Revisited (Ilas/Elzohery) • NCS Applications using SCALE 6.3.0 (Greene/Reed) • Non-LWR Updates (Bostelmann) 	Jesse Brown (ORNL) Jordan McDonnell (ORNL) Ugur Mertyurek (ORNL) Kursat Bekar (ORNL) Will Wieselquist (ORNL) Germina Ilas (ORNL) Rabab Elzohery (ORNL) Travis Greene (ORNL) Lisa Reed (ORNL) Rike Bostelmann (ORNL)
Break [3:00–3:10 pm]	
Wednesday, April 26, 2023, 3:10–5:00 pm (Eastern Daylight Time) In-Person only Tutorials	
Tutorial Session [3:10–5:00 pm] Building 5100, Room 128 Obiwan from A to Z	Steve Skutnik (ORNL) Shane Hart (ORNL)
Tutorial Session [3:10–5:00 pm] Building 5700, Room MS-A104 New Sensitivity Features and More in Sampler	Ugur Mertyurek (ORNL) Rike Bostelmann (ORNL)

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Event /Time	Moderator/Presenter
<p>Thursday, April 27, 2023, 8:00–3:00 pm (Eastern Daylight Time) Hybrid Technical Session, Building 5100, Room 128 (Zoom Call-in Option)</p>	
<p>Technical Session [8:00–9:40 am] <u>Special Session (Invited Talks)</u></p> <ul style="list-style-type: none"> • The Application of SCALE in Licensing Reviews (Schmidt) • Inference Methods for Reactor Calculations (Abdel-Khalik) • Orano NCS – Use of SCALE in our R&D Projects (Hennebach) • Use of SCALE at Georgia Tech for Senior Design projects (Petrovic) • Uses of SCALE in UNF-ST&DARDS for Spent Nuclear Fuel Analysis (Clarity) 	<p>Jeff Schmidt (U.S. Nuclear Regulatory Commission) Hany Abdel-Khalik (Purdue University) Maik Hennebach (Orano-NCS, Germany) Bojan Petrovic (Georgia Tech) Justin Clarity (Pacific Northwest National Laboratory)</p>
<p>Break [9:40–9:50 am]</p>	
<p>Technical Session [9:50 am–12:00 pm] <u>SCALE Open Mic</u></p> <ul style="list-style-type: none"> • Assessment of Nuclear Data Libraries for SFR Simulation using SCALE (Jiménez-Carrascosa) • Control BUC: Automation of Criticality Calculations with Burnup Credit under Flexible Operation Conditions (Berrios Torres) • Experience with the SCALE Code System (TUV NORD) • GNFA SCALE Applications in Support of Advanced Fuel Cycle (Paulson) • Impact of Multigroup vs. Continuous Energy Data on MSR Depletion Analysis (Bayne) • Shielding Analyses using MAVRIC with Continuous Energy and Multigroup Cross Sections (Hirji) 	<p>Antonio Jiménez-Carrascosa (Universidad Politécnica de Madrid, Spain) Marta Berrios Torres (ENUSA, Spain) Kai-Martin Haendel, Mehmed Kadiroglu, Alexander Mühle, Elina Oberlander, and Antonia Zipfel (TÜV NORD, Germany) Lon Paulson (GE Nuclear) Christopher Bayne (Georgia Tech) Rakim Hirji (Georgia Tech)</p>
<p>Working Lunch [12:00–1:00 pm] <u>50 years of ORIGEN Impacts (panel)</u></p>	<p>Germina Ilas (moderator) (ORNL) Syd Ball (ORNL) Ian Gauld (ORNL Retired) Cecil Parks (ORNL Retired/Boston Government Services) Doro Wiarda (ORNL) Will Wieselquist (ORNL)</p>

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Event /Time	Moderator/Presenter
<p>Technical Session [1:00–3:00 pm] <u>Best Practices for SCALE Modeling & Simulation</u></p> <ul style="list-style-type: none"> Analyzing Safeguards-Relevant Parameters of a Fast-Spectrum Molten Chloride Salt Reactor (Hartanto) Reactor Pressure Vessel Fluence Validation (Alpan) Nuclide Inventories with ORIGAMI for Criticality Safety Models (Elzohery) ORIGEN Sensitivities in 6.3 (Jeon/Wieselquist) SCALE-6.3.0/Polaris-PARCS-v3.4.2 Validation: Reactor Physics (Kim) VADER in a Nutshell (Hart) 	<p>Donny Hartanto (ORNL) Arzu Alpan (ORNL) Rabab Elzohery (ORNL) Shane Hart (ORNL) Bk Jeon (ORNL) Kang Seog Kim (ORNL) Will Wieselquist (ORNL)</p>
<p>Break [3:00–3:10 pm]</p>	
<p>Thursday, April 27, 2023, 3:10–5:00 pm (Eastern Daylight Time) In-Person only Tutorials</p>	
<p>Tutorial Session [3:10–5:00 pm] Building 5100, Room 128 Fulcrum Data and Geometry Visualization</p>	<p>Rob Lefebvre (ORNL) Shane Hart (ORNL)</p>
<p>Tutorial Session [3:10–5:00 pm] Building 5700, Room MS-A104 Molten Salt Reactor Analysis with SCALE</p>	<p>Donny Hartanto (ORNL) Jin Whan Bae (ORNL)</p>

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Event /Time	Moderator/Presenter
<p>Friday, April 28, 2023, 8:00 am–12:00 pm (Eastern Daylight Time) Hybrid Technical Sessions, Building 5100, Room 128 (Zoom Call-in Option)</p>	
<p>Technical Session [8:00–9:00 am] <u>SCALE Open Mic</u></p> <ul style="list-style-type: none"> • SCALE Modeling of High Temperature Gas Reactors (Berens) • ORIGEN Neutron Source Calculations for Pu-238 Program Material Packages (Karriem) • Target Activation and Analysis GUI (TAAG) Introduction and Test Problem (Krupcale) • Modeling a Pebble Bed Gas-Cooled Reactor with SCALE (Richter) • Analysis of the Parameterization Efficiency of the Macroscopic Cross Section of PWR Nuclear Reactors (Fiel) 	<p>Annie Berens (University of Tennessee-Knoxville [UT-K]) Zain Karriem (ORNL) Matthew Krupcale (ORNL) Zoe Richter (University of Illinois at Urbana-Champaign) João Claudio Batista Fiel (Instituto Militar de Engenharia, Brazil)</p>
<p>Technical Session [9:00–10:00 am] <u>Best SCALE Model Contest</u></p>	<p>Mario Redondo Morales (Universidad Politécnica de Madrid, Spain) Annie Berens (UT-K) Jonathon Faulkner (Georgia Tech) Ethan Krammer (University of New Mexico) Zoe Richter (University of Illinois at Urbana-Champaign) Jonathan Wing (UT-K)</p>
<p>Break [10:00–10:10 am]</p>	
<p>Technical Session [10:10–11:00 am] <u>Best SCALE Model Contest (continued)</u></p>	<p>Mathieu Dupont (ORNL) Rabab Elzohery (ORNL) Donny Hartanto (ORNL) Matt Jessee (ORNL) Kang Seog Kim (ORNL) Matthew Krupcale (ORNL) B.J. Marshall (ORNL)</p>
<p>Closing Session [11:00 am–12:00 pm]</p>	<p>Will Wieselquist (ORNL) Germina Illas (ORNL)</p>