

2025 SCALE Users' Group Workshop June 2–6, 2025 Presented Virtually from Oak Ridge National Laboratory via Microsoft Teams

Agenda as of 5/30/2025

Event contact	Germina Procop procopg@ornl.gov Lisa Fassino reedke@ornl.gov Will Wieselquist wieselquiswa@ornl.gov
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Monday, June 2, 2025, 8:00 am–1:00 pm (Eastern Daylight Time)	
Event/Time	Moderator/Presenter
Tutorial Session (8:00–8:55 am) Frequent Fulcrum Functions: The Basics of SCALE's Graphical User Interface	Rob Lefebvre (ORNL) Steve Skutnik (ORNL)
Tutorial Session (9:00–9:55 am) SCALE Utilities for Nuclear Data Interrogation, Comparison, and Visualization	Jesse Brown (ORNL) Jordan McDonnell (ORNL)
Tutorial Session (10:00–10:55 am) Fulcrum Data and Geometry Visualization	Rob Lefebvre (ORNL) Steve Skutnik (ORNL)
Introductions/Welcome (11:00–11:05 am)	
Technical Session (11:05 am–1:00 pm) <u>Special Session - Invited SCALE Users Talks</u> • SCALE as an Academic Tool in the AFIT Nuclear Engineering Program (Bickley) • Molten Salt Research Reactor modeling using SCALE (Chvala) • Irregular Assembly PWR Modelling with SCALE/PARCS (Lindley) • Microreactor Assembly Transportation Cask Model for Criticality Safety Basis Assessment (Zhong) • Machine Learning Assisted Validation of UNF Decay Heat (Shama)	Abigail Bickley (Air Force Institute of Technology) Ondrej Chvala (University of Texas, Austin) Ben Lindley (University of Wisconsin-Madison) Zhaopeng Zhong (Argonne National Laboratory) Ahmed Shama (ORNL)

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Tuesday, June 3, 2025, 8:00 am–1:00 pm (Eastern Daylight Time)

Event/Time	Moderator/Presenter
Tutorial Session (8:00–8:55 am) Activation Analysis with ORIGEN/MAVRIC for Advanced Reactors	Cihangir Celik (ORNL) Georgeta Radulescu (ORNL)
Tutorial Session (9:00–9:55 am) Molten Salt Reactor Analysis with SCALE	Donny Hartanto (ORNL) Rike Bostelmann (ORNL)
Tutorial Session (10:00–10:55 am) MAVRIC Long-Distance Statistics for Activation	Cihangir Celik (ORNL) Georgeta Radulescu (ORNL)
Technical Session (11:00 am–1:00 pm) <u>SCALE Open Mic</u> - Practical Applications of SCALE at NAGRA (Solans/de Aragao) - Modeling a Natural Circulation Small BWR with SCALE/PARCS (Quaal) - The Never-Ending Street (Peplow) - Using SCALE Modeling to Answer Nuclear Questions (Reed) - Isotopic Indicators for Fuel Burnup/Power Inference (Yin) - Application of SCALE in Criticality Safety Analysis and Reactor Design Studies (Fiel) - SCALE Usage at Dominion Energy (Markivich) - Heterogeneous and Homogeneous NuFuel-HTP2 Fuel Assembly for NuSCALE (Bevilacqua)	Virginie Solans/Alexis de Aragao (Nagra, Switzerland) Andrew Quaal (University of Wisconsin) Douglas Peplow (ORNL) Richard Reed (ORNL) Shiming Yin (Purdue University) João Claudio Batista Fiel (Military Institute of Engineering, Brazil) Alex J. Markivich (Dominion Energy) Arturo Bevilacqua (Inorganic nano Advanced Materials [InAM])

Wednesday, June 4, 2025, 8:00 am–1:00 pm (Eastern Daylight Time)

Event/Time	Moderator/Presenter
Tutorial Session (8:00–8:55 am) SCALE Sensitivity	Jordan McDonnell (ORNL) Alex Shaw (ORNL)
Tutorial Session (9:00–9:55 am) New Sensitivity Features and More in Sampler	Ugur Mertuyrek (ORNL) Rike Bostelmann (ORNL)
Tutorial Session (10:00–10:55 am) New Sensitivity Capability in ORIGEN	BK Jeon (ORNL) Yves Robert (ORNL)

Wednesday, June 4, 2025, 8:00 am–1:00 pm (Eastern Daylight Time)

Event/Time	Moderator/Presenter
Technical Session (11:00 am–1:00 pm) <u>Best SCALE Model Contest</u>	Ondrej Chvala (University of Texas, Austin) Virginie Solans/Alexis de Aragao (Nagra, Switzerland) Arturo Bevilacqua (InAM) João Claudio Batista Fiel (Military Institute of Engineering, Brazil) Larry Wetzel (LL Wetzel, LLC) Eirini Klemes (NC State University) Jonathan Wing (University of Tennessee) Travis Greene (ORNL) Donny Hartanto (ORNL) B. J. Marshall (ORNL) Douglas Peplow (ORNL) Richard Reed (ORNL)

Thursday, June 5, 2025, 8:00 am–1:00 pm (Eastern Daylight Time)

Event /Time	Moderator/Presenter
Tutorial Session (8:00–8:55 am) Modeling of TRISO Fuel with SCALE	Rike Bostelmann (ORNL) Donny Hartanto (ORNL)
Tutorial Session (9:00–9:55 am) VADER for Criticality Safety Validation	Lisa Fassino (ORNL) Alex Shaw (ORNL)
Tutorial Session (10:00–10:55 am) Accessible Data Files in SCALE and How to Use Them: II.JSON and CSV	Steve Skutnik (ORNL) Yves Robert (ORNL)
Technical Session (11:00 am–1:00 pm) <u>Sneak Peek at Upcoming Features in SCALE 7.0</u> - SCALE Nuclear Data Library Automation (Brown) - Polaris/PARCS Validation (Jessee) - SCALE SU Methods for Criticality Safety Validation Today/Tomorrow (Mertyurek) - Advancements in Monte Carlo Transport with Shift (Bekar) - ORIGAMI Features for Non-LWR Modeling (Skutnik) - New Fulcrum Capabilities for SCALE 6.3.3 (Skutnik)	Jesse Brown (ORNL) Matthew Jessee (ORNL) Ugur Mertyurek (ORNL) Kursat Bekar (ORNL) Steve Skutnik (ORNL) Steve Skutnik (ORNL)

Friday, June 6, 2025, 8:00 am–2:00 pm (Eastern Daylight Time)

Event /Time	Moderator/Presenter
Tutorial Session (8:00–8:55 am) SCALE Modelling & Simulations for Nuclide Inventories and Source Terms in Spent Nuclear Fuel	Germina Procop (ORNL) Yves Robert (ORNL)
Tutorial Session (9:00–9:55 am) ORIGIN Library Generation with TRITON	Steve Skutnik (ORNL) Yves Robert (ORNL)
Tutorial Session (10:00–10:55 am) LWR Decay Heat Analysis with SCALE	Germina Procop (ORNL) BK Jeon (ORNL)
Technical Session (11:00 am–1:00 pm) <u>SCALE Team Highlights</u> • Updates in SCALE 6.3.3 (Lefebvre) • SCALE 6.3 Validation: ◦ Criticality Safety (Greene) ◦ Radiation Shielding (Alpan) ◦ Reactor Physics (Kim) ◦ Spent Nuclear Fuel (Procop) • The DOE/NRC Criticality Safety for Commercial-Scale High-Assay Low-Enriched Uranium (HALEU) for Fuel Cycle and Transportation (DNCSH) Benchmarks (Dupont) • Validation Studies for High Burnup and Extended Enrichment Fuels in Burnup Credit Criticality Safety Analyses (Metwally) • TRISO-Fueled Heat Pipe Microreactor Analysis (Bostelmann) • Non-LWR Nuclide Importance to: ◦ Decay Heat Analysis of Non-LWR Spent Fuel Using SCALE (Robert) ◦ Criticality Safety Analysis of Non-LWR Spent Fuel Using SCALE (Shaw) ◦ Shielding Analysis of Non-LWR Spent Fuel Using SCALE (Radulescu)	Rob Lefebvre (ORNL) Travis Greene (ORNL) Arzu Alpan (ORNL) Kang Seog Kim (ORNL) Germina Procop (ORNL) Mathieu Dupont (ORNL) Walid Metwally (ORNL) Rike Bostelmann (ORNL) Yves Robert (ORNL) Alex Shaw (ORNL) Georgeta Radulescu (ORNL)
Closing Session (1:00–2:00 pm)	Germina Procop (ORNL) Will Wieselquist (ORNL)