








2024 Department of Energy Digital Twin Simulation Conference


Wednesday, March 20, 2024






| Time (ET) | Title | Presenter | |
|-----------|---------------------------------|--|---|
| 10:20 am | Welcome & Introduction | Charles Croufer | |
| Wed 3/20 | Thought Leadership Presentation | | |
| 10:30 am | The Battery Digital Thread | <p>Drew Colliatie - Director of Government Affairs – Siemens</p> <p>Vivek Furtado - Head of Battery Vertical - Siemens</p> |   |

| | Digital Twin - Modeling the Complexity | | |
|----------------|---|--|---|
| Themes | <i>Discover a Simulation and Test environment to build a comprehensive Digital Twin of any product.</i> | | |
| 11:00-11:25 am | Integrated Multiphysics Simulation and Test Platform to Advance Renewables Research | Joshua Major - Electrical Engineering Research - NREL |  |
| 11:25-11:50 am | Dynamic Fluid Body Interactions in Turbulent Flows for Hydropower Systems | Vivek Rao -Nuclear CFD Development Engineer - ORNL |  |
| 11:50-12:15 pm | Computational Chemistry for Energy: Advancing Digital Twins in Chemical Space Exploration and New Product Discovery | Estelle Deguillard - Technical Product Manager for Simcenter Culgi - Siemens |  |
| 12:15-12:25 pm | Short Break – 10min | | |

| | Go Faster & Explore the Possibilities | | |
|----------------|---|---|---|
| Themes | <i>Leverage Design Exploration and AI to get more out of any model and accelerate workflows.</i> | | |
| 12:25-12:50 pm | Dynamic Shape Optimization using Siemens Software | Cora Taylor - Michigan Technological University |  |
| 12:50-1:15 pm | The Simcenter value proposition of machine learning for the simulation practitioner | Justin Hodges - Senior AI/ML Technical Specialist - Siemens |  |

| | | | |
|--------------|--|--|---|
| 1:15-1:40 pm | Evaluation of Unique Signal Stronglink Performance with Simcenter 3D and HEEDS | Matt Williams - Principal Member of R&D Technical Staff - Sandia National Laboratories |  |
| 1:40-1:50 pm | <i>Short break – 10min</i> | | |

| | Digital Thread - Stay Integrated | | |
|--------------|--|---|---|
| Themes | <i>Manage the data and processes for research and leverage the Digital Twin at all phases of the product lifecycle.</i> | | |
| 1:50-2:15 pm | The connected Digital Thread and enabling simulation technologies for Accelerator Development | Don Mitchell - Department Head Mechanical Engineering - Fermilab |  |
| 2:15-2:40 pm | High-Fidelity Executable Digital Twins for the Nuclear Powerplant | Emilio Baglietto - Associate Professor of Nuclear Science and Engineering - Massachusetts Institute of Technology |  |
| 2:40-3:05 pm | The Digital Thread for Materials Development – How Siemens supports and accelerates the materials development process | Chris Piela- Portfolio Development Executive - Siemens |  |
| 3:05-3:10 pm | <i>Wrap-up - Thank you</i> | | |