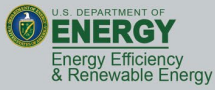




ENERGY INNOVATION

Manufacturing Day

October 1, 2021



AGENDA

Manufacturing Day

VIRTUAL EVENT

October 1, 2021

7:30 a.m. – 12:30 p.m. Pacific Time

All times listed in Pacific Time

7:30 a.m. **Login Period**

Event will be launched so you may log in early to ensure your connections.

8:00 a.m. **Welcome**

Robin Miles, HPC4EnergyInnovation Director, Lawrence Livermore National Laboratory

8:05 a.m. **Overview of HPC4EI Program**

Aaron Fisher, HPC4EnergyInnovation Project Manager, Lawrence Livermore National Laboratory

8:30 a.m. **DOE Exascale Program: Computing for the Future**

Douglas B. Kothe, Director of U.S. Department of Energy Exascale Computing Project (ECP), Oak Ridge National Laboratory

9:15 a.m. **DOE Artificial Intelligence Initiative**

Pamela K. Isom, Director of Artificial Intelligence and Technology Office, U.S. Department of Energy

Working with Industry and Developing Next-Generation Computational Scientists

10:00 a.m. Computational Modelling of Metal organic framework (MOF) Materials for Direct Carbon Capture Applications

Jan Steckel and Samir Budhathoki, National Energy Technology Laboratory
Student: **Tiernan Baucom**

10:20 a.m. CFD Simulation of Aerobic Gas Fermentation to Enable Commercial Conversion of CO₂ into Aquaculture and Animal Feed - NovoNutrients

Milo Parra-Alvarez and Hariswaran Sitaraman, National Renewable Energy Laboratory
Student: **Jason Sanchez**

- 10:40 a.m. Optimization of Alumina and Aluminum Fluoride Feeding in Advanced Aluminum Smelting Cells using Large Eddy Simulation - Alcoa
Nithin Panicker, Oak Ridge National Laboratory
Student: **Thomas Nguyen**
- 11:00 a.m. Topology Optimization of Fischer Tropsch Reactor Design for Synthetic Fuel Production - OxEon Energy, LLC
Jorge Barrera Cruz, Lawrence Livermore National Laboratory
Student: **Nicholas Fullilove**
- 11:20 a.m. Application of High-Performance Computing (HPC) to Optimize Reheat Furnace Efficiency in Steel Manufacturing - Steel Manufacturing Simulation and Visualization Consortium (SMSVC) and ArcelorMittal USA
May Wu, Argonne National Laboratory
Student: **David McCormick**
- 11:40 a.m. **Closing Remarks**
Robin Miles, HPC4EnergyInnovation Director, Lawrence Livermore National Laboratory
- 11:45 p.m. **Adjourn**

Sign up for Virtual Computational Facility Tours

Optional Virtual Computational Facility Tours

Argonne National Laboratory

Argonne Leadership Computing Facility (ALCF) will give a live tour of the ALCF data center and visualization laboratory immediately after the closing remarks.

Click [here](#) to join.

Lawrence Berkeley National Laboratory

Register for a docent-led virtual tour of the National Energy Research Scientific Computing Center (NERSC) facility.

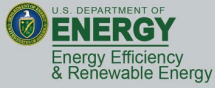
Click [here](#) to view the Lawrence Berkeley National Laboratory Virtual Tours page.



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Oak Ridge National Laboratory

Visit the Oak Ridge Leadership Computing Facility (OLCF) through a self-guided virtual tour.

Explore Oak Ridge National Laboratory's Supercomputing Center [here](#).

Sandia National Laboratories

Visit Sandia National Laboratories Data Center through a self-guided virtual tour.

View Data Center tour and list of other available SNL virtual tours [here](#).

Event Coordinator: Michelle Herawi, HPC4EnergyInnovation Administrator, Lawrence Livermore National Laboratory