HPC4EnergyInnovation Special Event

HPC4EI Virtual Event: Focus on Process Optimization

April 16, 2021
8:00 a.m. PDT (11:00 a.m. EDT)

Agenda

8:00 a.m. PDT (11:00 a.m. EDT)	**Welcome** **Robin Miles,** HPC4EI Program Director**,** Lawrence Livermore National Laboratory
8:10 a.m. PDT (11:10 a.m. EDT)	**HPC4EnergyInnovation Program Overview: National Laboratories Partner with U.S. Manufacturers to Increase Innovation and Energy Efficiency** **Aaron Fisher,** HPC4EI Project Manager, Lawrence Livermore National Laboratory

Session 1: Industrial Optimization A

Session Chair: **David Martin**, Argonne National Laboratory

8:30 a.m. PDT (11:30 a.m. EDT)	**Design Optimization of Porous Flow Reactors** **Victor Beck**, Lawrence Livermore National Laboratory
8:45 a.m. PDT (11:45 a.m. EDT)	**Design of Passive Coolers by Topology Optimization** **Boyan Lazarov**, Lawrence Livermore National Laboratory
9:00 a.m. PDT (12:00 p.m. EDT)	**Computational Models of Polyurethane Foam Formation for Property Prediction** **Rekha Rao**, Sandia National Laboratories
9:15 a.m. PDT (12:15 p.m. EDT)	**Round Table Discussion**
9:30 a.m. PDT (12:15 p.m. EDT)	***Break***

Session 2: Industrial Optimization B

Session Chair: **Michael Martin**, National Renewable Energy Laboratory

9:45 a.m. PDT (12:45 p.m. EDT)	**The Impact of High Performance Computing on Improved Metal Powder Production by Gas Atomization** **Iver Anderson**, Ames Laboratory **Andrew Heidloff**, Praxair Surface Technologies, Inc. (A Linde Company)
10:05 a.m. PDT (1:05 p.m. EDT)	**Optimizing Additive Manufacturing via Multi-Scale HPC Simulations and Experimental Characterization** **Stan Marius**, Argonne National Laboratory **Jeremy Iten**, Elementum 3D
10:25 a.m. PDT (1:25 p.m. EDT)	**Round Table Discussion**
10:45 a.m. PDT (1:45 p.m. EDT)	***Break***

Session 3: Focus on Machine Learning

11:00 a.m. PDT (2:00 p.m. EDT)	**Introduction to Machine Learning and Applications to Industrial Processes** **Brenda Ng and Victor Castillo**, Lawrence Livermore National Laboratory
12:30 p.m. PDT (3:30 p.m. EDT)	**Closing Remarks**