



# MANUFACTURING

## Industry Engagement Day

April 15 – 16, 2020



Energy Efficiency & Renewable Energy



U.S. DEPARTMENT OF ENERGY

Office of Fossil Energy



Sandia National Laboratories



U.S. DEPARTMENT OF ENERGY

Office of Science

### DRAFT AGENDA

#### Hyatt Centric Chicago Magnificent Mile

633 N Saint Clair St.

Chicago, IL USA

April 15-16, 2020

#### Wednesday, April 15, 2020

8:00 a.m. **Registration and Hospitality**

8:30 a.m. **Welcome**

**Robin Miles**, HPC4Energy Innovation Director, Lawrence Livermore National Laboratory

**Bob Gemmer**, Technology Manager, Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

**Valri Lightner**, Deputy Director, Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

9:00 a.m. **Motivating HPC: HPC Gets Down to Business**

**Fred Streitz**, Chief Scientist, Artificial Intelligence and Technology Office, Department of Energy

9:20 a.m. **Motivating HPC in Product Design: The Gulfstream Story**

**Larry Patterson**, Manager of High-Performance Computing, Gulfstream Aerospace (retired)

9-:50 a.m. **Motivating HPC in Process Design: Applications at PPG**

**Phillip Yu**, Director, Corporate Science & Technology and Operations, PPG Industries

10:20 a.m. **HPC for New Material Design: The Aluminum-Cerium Story**

**Vince Lordi**, Senior Materials Development Scientist – Lawrence Livermore National Laboratory

10:50 a.m. **Break**

Attire: Business Casual

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**Wednesday, April 15, 2020 – Continued**

- 11:05 a.m.     **Communicating HPC Return on Investment (ROI) to Decision-Makers**  
  
    **Joerg Gablonsky**, Chair, Enterprise High-Performance Computing Council and Associate Technical Fellow - Boeing  
  
    **Richard Arthur**, Senior Principal Engineer and Director - Advanced Computing, General Electric
- 12:00 p.m.     **Working Lunch**
- 1:00 p.m.     **AI for Scientific Computing**  
  
    **Vic Castillo**, Senior Staff Engineer, Lawrence Livermore National Laboratory
- 1:20 p.m.     **Impact of the HPC4EI Program for Companies and National Energy Usage**  
    *Session Chair: Aaron Fisher (LLNL)*  
  
    *UTRC: Dr. Tahany El-Wardany*  
    *GM: Dr. Andy Wang*  
    *ArcelorMittal: Dr. Tathagata Bhattacharya*  
    *Dow Chemical: Dr. Kurt Koppi*
- 2:00 p.m.     **HPC at Small Mid-sized and Resource-Constrained Companies**  
    *Session Chair: Suzy Tichenor (ORNL)*  
  
    *7AC: Dr. Peter Luttk*  
    *Harper International: Dr. Prasad Apte*  
    *APPTI: David Turpin, Executive Director*
- 2:40 p.m.     **Beyond the Hype: Machine Learning in Real Applications**  
    *Session Chair: Peter Nugent (LBNL)*  
  
    *Vitro Glass: Dr. Jim McCamy*  
    *SPP: CEO Sal DellaVilla*
- 3:20 p.m.     **Gaps in High Performance Computing**  
  
    **Keith Gray**, Director of Technical Computing, BP
- 3:45 p.m.     **Break**
- 4:00 p.m.     **Break Out Session – How is HPC4 Successful? How could it be Improved?**  
  
    *Break out group discussion for an hour. Wrap up discussion as a whole group for an hour.*
- 5:30 p.m.     **Reception and Poster Session**
- 7:30 p.m.     **Adjourn Day 1**

**Thursday, April 16, 2019**

- 8:15 a.m.      **Arrival and Hospitality**
- 8:30 a.m.      **HPC as a Part of Company Culture**  
**Tom Lange**, CEO Technology Optimization & Management  
**Mohamad El-Zein**, Manager, Metals and Mechanics, John Deere (retired)
- 9:30 a.m.      **Future Directions in DOE Computing**  
**John Shalf**, Department Head for Computer Science, Lawrence Berkeley National Laboratory
- 10:00 a.m.     **Status of HPC on the Cloud**  
*Session Chair: John Turner (ORNL)*  
**Peter Bradley**, Fellow, High Performance Computing, Pratt and Whitney  
**Barry Bolding**, Amazon Cloud Services  
**Tim Carroll**, Microsoft Azure
- 10:50 a.m.     **Wrap-up: Closing the Gap between Needs and Resources\***
- 11:30 a.m.     **Working Lunch**
- 12:00 p.m.     **Tour of ANL Supercomputing Facility**  
*Must sign up during registration and through the ANL site badging portal in advance for laboratory site entry.*

*Note: People interested in attending the afternoon session of the Material and Manufacturing Innovation Summit could depart for ANL at around 11:00 a.m.*