



September 4th & 5th Argonne, IL 85th HPC/AI User Forum Agenda

Focus Area: Real-world Uses of AI in Industry, Science & Energy

Theme: Challenges in Making AI Fully Useful (hardware, software, data, models, etc.)

Wednesday, September 4th

7:15 – 8:00 am Breakfast and Badging

8:00 – 8:30 am Welcome and Meeting Overview

- Welcome & Logistics, Piyush Mehrotra and Earl Joseph
- Changes in Advanced AI and HPC Market Update, Earl Joseph, Hyperion Research

(Session Leader: Piyush Mehrotra, Chairman, HPC User Forum Steering Committee)

8:30 – 9:00 am Welcome to ANL and ANL Update, Rick Stevens, ANL

9:00 – 9:30 am The Future of AI, Rick Stevens, ANL

9:30 – 11:45 am Real-world Large Scale AI Use Case and Examples

- **AuroraGPT**, Sam Foreman, ANL
- **Brain Reconstruction**, Tom Uram, ANL
- **AI in Medicine**, Arvind Ramanathan, ANL
- *Break: 10:00 – 10:15 am*
- **AI for Controlling Things** (e.g., reactors), Chris Ritter, Idaho National Laboratory
- **AI in Medicine** (Part Two), Heidi Hanson, ORNL
- **AI and Literature**, Ben Blaiszik, University of Chicago
- **Nvidia Earth 2.0**. Nvidia (speaker TBD)

11:45 – 12:00 pm Vendor Update: HPE

12:00 – 1:00 pm Lunch

(Session Leader: David Martin, ANL)

1:00 – 1:30 pm The FASST Initiative, Rick Stevens, ANL

1:30 – 2:00 pm AI Technologies and Innovations Showcase: SambaNova (Marshall Choy), IBM, Linaro, Intel, QuEra, WEKA

2:00 – 2:30 pm Using Nvidia to Build Large Scale AI Systems, Nvidia (speaker TBD)

2:30 – 2:45 pm Break

2:45 – 3:00 pm Vendor Update: TBD

3:00 – 3:30 pm AI in Healthcare, David Holmes, Mayo Clinic

3:30 – 4:00 pm CSP's Approach to Advancing AI for Science, Mike Ringenburg, Microsoft Azure HPC & AI

4:00 – 4:30 pm DoD Mod Update, Lloyd Slonaker, DoD HPCMP

4:30 – 5:00 pm ORNL Update, Nick Hagerty, ORNL

5:00 – 6:00 pm Break

6:00 – 8:30 pm Special Dinner Presentation: History of Computing at Argonne, Lois Curfman McInnes, ANL

Tours: Tours of Aurora, ALCF machine room, and ALCF visualization laboratory will be available during the reception

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Thursday, September 5th

7:15 – 8:00 am Breakfast and Badging

8:00 – 8:15 am Welcome and Meeting Logistics

(Session Leader: Piyush Mehrotra, HPC User Forum Steering Committee)

8:15 – 9:45 am Real-world AI Use Cases and Plans in Industry: Presentations

- **Pharma**, Andrey Shinkarev, AbbVie
- **Oil and Gas**, Yue Hu, BP
- **Aerospace**, Joerg Gablonsky, The Boeing Company
- **AI in Medicine**, Peptilogics

9:45 – 10:00 am Break

10:00 – 10:30 am Real-world AI Use Cases and Plans in Industry: Panel

10:30 – 10:45 am Vendor Update: Lenovo

10:45 – 11:00 am New Research Findings on AI, Bob Sorensen & Tom Sorensen, Hyperion Research

11:00 – 11:15 am AI Applications within the US Domain, Gianluca Longoni, FedData Technology

11:15 – 11:30 am Generative AI to Drive HPC Graph Workloads on Large SMP Systems, David Haglin, Trovares

11:30 – 12:00 pm Lumi Update, Kimmo Koski, CSC – IT Center for Science

12:00 – 1:00 pm Lunch

(Session Leader: TBD)

1:00 – 3:00 pm Real-world Large Scale AI Use Case and Examples (continued)

- **AI in Medicine "Some of the biology (non-biomedicine)"**, Nicholas Chia, ANL
- **Surrogate Models in Climate & Weather**, Rao Kotamarthi, ANL
- **Programming AI (e.g., OpenAI collaborations)**, Brian Spears, LLNL
- **Autonomous Discovery; Open AI Questions in Different Domains**, Ian Foster, ANL
- **AI for Controlling Things (e.g., reactors)**, Andrew Seigel and Rick Vilim, ANL

3:00 – 3:15 pm Break

3:15 – 3:45 pm Scientific AI Efforts at NERSC, Peter Harrington, NERSC

3:45 – 4:00 pm Vendor Update: DDN

4:00 – 5:20 pm Integrated Resource Infrastructures

- Debbie Bard, LBL
- Ian Foster, ANL
- Donovan Mathias, NASA

5:20 – 5:30 pm Conclusions, Piyush Mehrotra and Earl Joseph

5:30 – 6:00 pm Break

6:00 – 8:30 pm Special Dinner Event and Tour (Tours of the Advanced Photon Source will be available during the reception and dinner)

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