

Machine Learning Day at ISC 2018

Within the last few years, machine learning has become a vital topic within the HPC community. This is true of both vendors, who see the development as an opportunity to expand their high-performance solutions into a new and fast-growing market, and traditional HPC users, who are increasingly incorporating these techniques into their workflows to speed processing and extract greater insights.

As a result, ISC High Performance will provide a special focus on this subject matter with a one-day track on **Wednesday, June 27**. It is being led by Program Co-Chairs Janis Keuper, of the Fraunhofer Institute for Industrial Mathematics (ITWM) and Brian van Essen, from Lawrence Livermore National Laboratory (LLNL).

Attendance will require a **Conference Pass**.

Principal topic areas include:

- How machine learning applications are changing HPC architectures
- Challenges towards scalable machine learning on HPC systems
- Software for machine learning on HPC
- How the technology is being applied, by both commercial users and researchers

Chairs - Dr.-Ing. Janis Keuper & Dr. Brian Van Essen





Keynotes and Speakers Confirmed to Date

Two keynotes, along with a series of talks, will give attendees up-to-date insights on the rapid development in machine learning and also demonstrate how this technology can be enabled with HPC. For this, we have lined up a range of speakers from industry, academia, and the vendor community to share their expertise in this area.

Our two keynote presenters are Jack Wells (ORNL), who will deliver a talk about the Summit architecture for machine learning, and Frank Hutter (University of Freiburg), who will speak about automatic machine learning.

Our current list of speakers for invited talks includes:

- Sarah Bird, Facebook
- [Louis Capps](#), NVIDIA
- [Pradeep Dubey](#), Intel
- [Frank Hutter](#), University of Freiburg
- [Michael Kluge](#), ZiH Dresden
- [Azalia Mirhoseini](#), Google
- [Dirk Pleiter](#), Jülich Supercomputing Centre
- Peter Schlicht, Volkswagen Group
- Srinivas Sridharan, Intel
- [Dominik Straßel](#), Fraunhofer
- [Bernhard Vogginger](#), TU Dresden
- [Jack Wells](#), Oak Ridge National Laboratory

For the full Machine Learning Day program click [here](#).

The Student Cluster Competition and Machine Learning

On the same day, student teams participating in the [student cluster competition](#) (SCC), will compete on an image-recognition task using TensorFlow, a popular open source library used for machine learning. The specific details of the task can be found [here](#).

Attendees are encouraged to visit the SCC during session breaks to witness the graduate, undergraduate and even some high-school students grapple with real world machine learning problems.

The SCC is organized by ISC High Performance and the HPC Advisory Council.