Machine Learning Applications for Particle Accelerators

Tuesday, February 27 through Friday, March 2, 2018
Workshop Goals

• Collect and unify the community’s understanding of the relevant state-of-the-art ML techniques.

• Provide a simple tutorial of machine learning for accelerator physicists and engineers.

• Seed collaborations between laboratories, academia, and industry.

• Author a whitepaper explaining the current opportunities for ML techniques in particle accelerators, with a few illustrative examples. This whitepaper should explain why now is the time for the community to fully embrace ML alongside optimization as the modern way to aid particle accelerator design and operation.
Web presence and communication

Workshop website

Timetable
https://indico.fnal.gov/event/16327/timetable

Slack Workspace Messaging
http://accelerator-ml.slack.com

Zoom Videoconferencing
https://stanford.zoom.us/j/750616509
Tuesday: Tutorial
Wednesday Morning: Facility Needs
    Afternoon: Tuning
    Evening: Dutch Goose Reception
Thursday Morning: Simulations and Modeling
    Afternoon: Prognostics, Tour
    Evening: Meyer-Buck House Reception
Friday Morning: Data Analysis and Summary
    Afternoon: Whitepaper planning

Every day Breakfast: 7:30-9pm
    Lunch: noon-1:30pm
Wednesday Reception: Dutch Goose

- 6-9pm
- Transportation on your own
- Food and Drinks provided
- 3567 Alameda de las Pulgas, Menlo Park, CA 94025
- [http://www.dutchgoose.net](http://www.dutchgoose.net)
- Sports Bar
- Parking lot, street parking
Thursday Reception: Meyer-Buck House

- 6-8pm
- Transportation on your own
- Drinks and hors d'oeuvres provided
- (optional) Parking at Hewlett Foundation: 2121 Sand Hill Rd, Menlo Park, CA 94025
Organizers

Local organizing Committee
Xiaobiao Huang  xiahuang@slac.stanford.edu
Christopher Mayes  cmayes@stanford.edu
Daniel Ratner  dratner@slac.stanford.edu
Tor Raubenheimer  tor@slac.Stanford.edu

Program Committee
Yunhai Cai, Erik Bründermann, Gianluca Valentino, Alexander Sheinker, Minjie Yan, Anke-Susanne Müller, Daniel Bowring, Ilya Agapov, Auralee Edelen, Kevin Li, Rasmus Ischebeck, Sandra Biedon, Xiaobiao Huang, Christopher Mayes, Daniel Ratner, Tor Raubenheimer