Al-driven autonomy to accelerate X-ray experiment-based discovery

A CHESS 2030 WORKSHOP

June 21-22, 2021

The Cornell High Energy Synchrotron Source will host a highly interdisciplinary online workshop identifying important fundamental questions related to artificial-intelligence-driven autonomous experimentation in combination X-ray based characterization techniques. The workshop will bring together leaders in the field from industry, academia, and the national labs to explore and articulate the most critical opportunities and challenges to exploiting artificial intelligence and automation for materials discovery.



Monday, June 21st

10:30 am-12:30 pm EST: Al-Driven Experimental Science 1:30 pm - 3:30 pm EST: Al-Driven Exploration with Synchrotron Radiation

Tuesday, June 22nd

 10:30 am-12:30 pm EST: Challenges & Opportunities in Autonomous Control
1:30 pm - 3:30 pm EST: Automation in Characterization and Data Analysis

In addition to these four topical sessions, the workshop will include an "Idea Slam" consisting of contributed presentations, 3-5 minutes each.

Featuring invited presentations by:

Dan Allen, Brookhaven National Laboratory Max Amsler, Cornell Keith Brown, Boston U. John Gregoire, Cal Tech Jason Hattrick-Simpers, University of Toronto Jesse Hopkins, Advanced Photon Source Ron Jones, NIST Howie Joress, NIST Joseph Kline, NIST Tammy Ma, Lawrence Livermore National Laboratory Apurva Mehta, Stanford Jed Pitera, IBM Ichiro Takeuchi, U. of Maryland Kevin Yager, Brookhaven National Laboratory Peter Zwart, Berkely Lab

