AI/ML FOR PARTICLE ACCELERATOR, X-RAY BEAMLINES AND ELECTRON MICROSCOPY WORKSHOP @ ARGONNE

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OPENING REMARKS
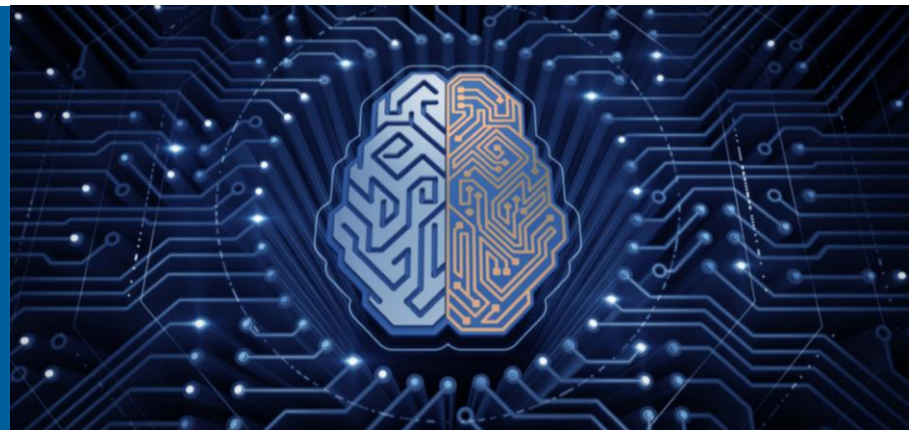
ORGANIZING COMMITTEE

Michael Borland (APS)   John Power (HEP)   Brahim Mustapha (PHY)
Martin Holt (NST)   Nicholas Schwarz (APS) Olle Heinonen (PSE)
Charudatta Phatak (MSD)   Jianguo Wen (NST)

November 1st - 3rd, 2021
Argonne, IL (Virtual)

WORKSHOP OBJECTIVES / GOALS

❑Review the different AI/ML methods and techniques developed and applied in the fields of Particle Accelerators, X-ray Beamlines and Electron Microscopy.

❑Inspire the use of new or different AI/ML techniques. Although the specific problems are different, applicable AI/ML methods maybe similar.

❑Exchange ideas and learn from each other experiences.

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WORKSHOP FORMAT

❑Six sessions covering the following topics:
  o Tuning and Control
  o Data Analytics
  o Imaging and Data Processing
  o Failure Detection, Virtual Diagnostics, and Digital Twins
  o Autonomous Discovery
  o Data, Computing, and Modeling

… some topics are tightly related and cannot be separated!

❑Each session ends with ~ 30 min discussion.

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WORKSHOP ROLL-OUT

❑Talks are 20-25 min, we may not have time for questions after the talks, please take note to ask in the discussion session.

❑Speakers are asked to remain through the end of their session to participate in the discussions.

❑Speakers who can't stay, please let us know and we will allow questions after your talks.

WORKSHOP ROLL-OUT

❑Speakers can share their screens for their presentations, but if there is an issue, we can share it for you.

❑Speakers, please send your presentations when ready, we will post them on the Workshop indico webpage.

❑The sessions will be recorded, please let us know if you have an issue with that?

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WORKSHOP DISCUSSION SESSION

❑Open discussion by the audience to all speakers of the session.

❑When the questions from the audience are exhausted, we switch to a panel discussion moderated by the session's chair and all speakers of the session.

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WORKSHOP PROGRAM

❑The program can be found at the indico webpage below:

https://indico.fnal.gov/event/50731/

THANKS TO

❑Janet Bergman: Meeting Secretary

❑Jo-Ann Furman: Indico webpage

❑All the Speakers and Workshop Participants

❑The Organizing Committee…

THANK YOU ALL

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