Contribution ID: **4**   Type: **A collaboration/project summary talk**

Summary of Machine Learning Applications for the COHERENT Collaboration

Tuesday, 14 July 2020 13:00 (40 minutes)

The COHERENT collaboration utilizes a suite of detectors to search for coherent elastic neutrino-nucleus scattering (CEvNS) and associated backgrounds at the Spallation Neutron Source (SNS) at Oak Ridge National Laboratory. Measurement of the low-energy nuclear recoil signature of CEvNS events necessitates the identification and rejection of environmental and detector-intrinsic backgrounds. Machine learning for purpose of event identification is being investigated in several COHERENT detectors. An overview of the techniques being used and the results of their application to experimental data will be presented.

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Session Classification: Day 2 Afternoon