Welcome to IF AI Jamboree

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AI/ML@Fermilab – Overview

Overview:

- AI/ML techniques significantly advance HEP research by learning complex patterns in high-dimensional feature spaces, accelerating time to physics, and improving operational efficiency.

IF Scientists works on AI/ML areas that align with our core capabilities:

- Development of AI/ML Models:
  - Improve detector simulation and reconstruction to enhance physics sensitivities.
- Real-time applications
  - Make trigger decisions with AI/ML models running on FPGAs/GPUs.
- AI/ML model deployment and community engagement

  Goal of Jamboree: discuss current status and future plans.

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Agenda

Time	Title	Speaker(s)	Duration
1:05 PM → 1:20 PM	**Spine**	Speaker: Justin Mueller (Fermilab)	15m
1:20 PM → 1:35 PM	**NuGraph/GNN**	Speaker: Giuseppe Cerati (Fermilab)	15m
1:35 PM → 1:50 PM	**DNN ROI**	Speaker: Gray Putnam	15m
1:50 PM → 2:05 PM	**NuSONIC**	Speaker: Michael H L Wang (Fermilab)	15m
2:05 PM → 2:25 PM	**AIPO Strategy Overview**	Speaker: Nhan Tran (FNAL)	20m
2:25 PM → 2:40 PM	**Smart-Pixel TPC**	Speaker: Seon-Hee Seo (Fermilab)	15m
2:40 PM → 2:55 PM	**SN reco 1**	Speaker: Michael H L Wang (Fermilab)	15m
2:55 PM → 3:10 PM	**SN reco 2**	Speakers: Meghna Bhattacharya (University of Mississippi), Meghna Bhattacharya	15m
3:10 PM → 3:25 PM	**SN reco 3**	Speakers: Jennifer Ngadiuba (FNAL), Jennifer Ngadiuba (Caltech), Maira Khan	15m

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- There will be a lab-wide AI Jamboree early next year. The details will be announced soon.

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