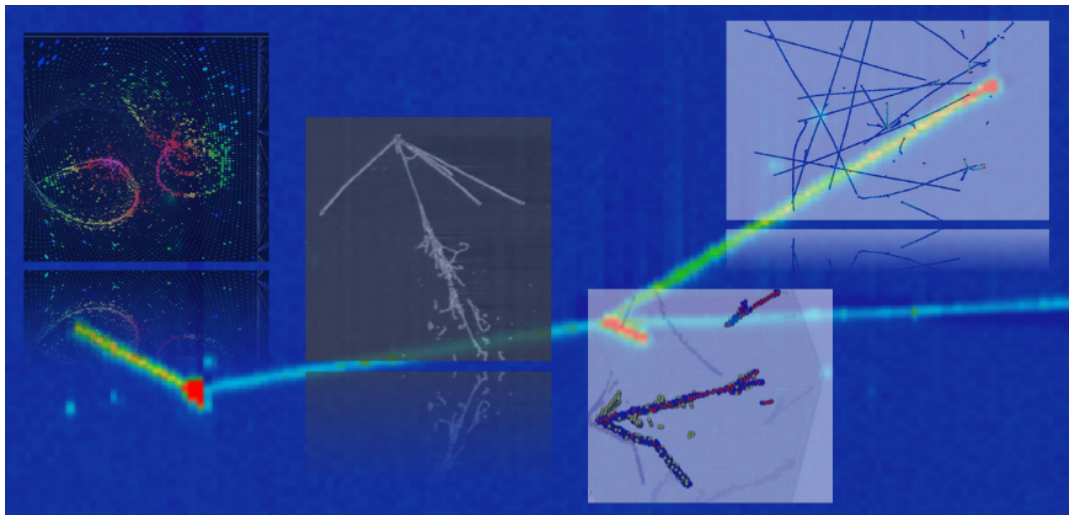


Session Program

20-31 Oct 2025



Neutrino Physics and Machine Learning (NPML 2025)

AI//ML for Detector Physics Modeling

University of Tokyo, Koshiba Hall
7-3 Hongo, Bunkyo City, Tokyo 113-0033

Thursday 30 October

13:00

AI//ML for Detector Physics Modeling

Session | **Location:** University of Tokyo, Koshiba Hall, 7-3 Hongo, Bunkyo City, Tokyo 113-0033

13:00–13:25

Determining a TPC Electric Field using Physics-Informed Continuous Normalizing Flows

Speaker

Ivy Li

13:25–13:35

Q/A

13:35–13:50

PMT Timing Calibration in Large Liquid Scintillator Detectors with In Situ Radioactive Backgrounds

Speaker

Scott DeGraw

13:50–13:55

Q/A

13:55–14:20

LUCiD: a Light-based Unified Calibration and tracking Differentiable simulation

Speaker

Omar Alterkait

14:20–14:30

Q/A

14:30–14:55

Uncertainty propagation with a LArTPC differentiable simulator

Speaker

Pierre Granger

14:55–15:05

Q/A

15:05–15:20

Towards data application of simultaneously calibrating multiple detector effects using differentiable simulation

Speaker

Yifan Chen

15:20–15:25

Q/A

15:25–15:45

Coffee

15:45