

Session Program

17-23 Aug 2025

ML4Jets2025

Jet Physics

California Institute of Technology, CHEN100
1200 E. California Blvd., Pasadena, California

Monday 18 August

14:00

Jet Physics

Session | **Location:** Chen 100, Chen Neuroscience Research Building | **Convener:** Philip Coleman Harris

14:00–14:20

Machine Learning Approaches for Investigating Jet Quenching in Quark-Gluon Plasma via Jet Substructures Analysis

Speakers

Leonardo Lima Da Silva, Marcelo Gameiro Munhoz

14:20–14:40

IAFormer: Interaction-Aware Transformer network for collider data analysis

Speaker

Dr Ahmed Hammad

14:40–15:00

Representation Learning of Jets with Physics-Informed Self-Distillations

Speaker

Zichun Hao

15:00–15:20

Particle transformers for boosted $H \rightarrow WW$ identification

Speaker

Raghav Kansal

15:20

Tuesday 19 August

14:00

Jet Physics

Session | **Location:** Chen 100, Chen Neuroscience Research Building | **Convener:** Raghav Kansal

14:00–14:20 **Get Your Jets in Shape: Conditioning Heads and Backbones**

Speaker

Ian Pang

14:20–14:40

A comparison of self-supervised pre-training methods for foundation models in jet physics

Speaker

Joschka Birk

14:40–15:00

Heavy-Flavour Frontier: Tagging at ATLAS with GN3

Speaker

Diptaparna Biswas

15:00–15:20

Blooming LHC analyses with all-inclusive pretrained boosted-jet models

Speakers

Congqiao Li, Dawei Fu

15:20

Wednesday 20 August

14:00

Jet Physics

Session | **Location:** Chen 100, Chen Neuroscience Research Building | **Convener:** Daniel Whiteson

14:00–14:20

Transformer-based tagger for boosted Higgs

Speaker

Edoardo Critelli

14:20–14:40

Fragmentation tagging

Speaker

Yevgeny Kats

14:40–15:00

The Pareto Frontier of Resilient Jet Tagging

Speaker

Rikab Gambhir

15:00–15:20

Fast Jet Tagging with MLP-Mixers on FPGAs

Speaker

Chang Sun

15:20

Thursday 21 August

11:20

Jet Physics

Session | **Location:** Chen 100, Chen Neuroscience Research Building | **Convener:** Raghav Kansal

11:20–11:40

Deep Learning Methods for Jet Tagging and Process Classification Using Image Processing

Speaker

Mr Jhoao Gabriel Martins Campos Almeida Arneiro

11:40–12:00

HEP-JEPA: Towards a found model for high energy physics using joint embedding predictive architecture [Remote]

Speaker

Jai Bardhan

12:00–12:20

Jet tagging with the Lund Jet Plane

Speaker

Ethan Lewis Simpson

12:20–12:40

[Remote] Integrating Energy Flow Networks with Jet Substructure Observables for Enhanced Jet Quenching Studies

Speaker

João A. Gonçalves

12:40–13:00

Comparing Continuous and Tokenized Jet Generation Approaches for Precision Modeling

Speaker

Ian Pang

13:00