

Session Program

Jun 4 - 5, 2025

AI for Hadron Spectroscopy at JLab

AI for Hadron Spectroscopy at JLab

Jefferson Lab, CC F224-225 & Zoom
12000 Jefferson Ave. Newport News, VA 23606

Wed, June 4

10:30 AM

AI for Hadron Spectroscopy at JLab

Session | **Location:** Jefferson Lab, CC F224-225 & Zoom, 12000 Jefferson Ave. Newport News, VA 23606

10:30 – 11:00 **Summary talk of NPTwins 2024**

Speaker

Yaohang Li

11:00 – 11:30 **EAIRA: Evaluation of LLMs/RLMs as Research Assistants**

Speaker

Franck Cappello

11:30 – 12:00 **Extracting x -Dependent GPDs with Normalizing Flow**

Speaker

Zhite Yu

12:00 PM

2:00 PM

AI for Hadron Spectroscopy at JLab

Session | **Location:** Jefferson Lab, CC F224-225 & Zoom, 12000 Jefferson Ave. Newport News, VA 23606

14:00 – 14:30 **AI Applications in Hadronic Physics**

Speaker

Geoffrey Fox

14:30 – 15:00 **Hadron spectroscopy analyses with CLAS and CLAS12**

Speaker

Raffaella De Vita

15:00 – 15:30 **AI for Unfolding**

Speaker

Benjamin Nachman

15:30 – 16:00 **Amplitude-based analyses at GlueX**

Speaker

Mr Boris Grube

4:00 PM

Thu, June 5

9:00 AM

AI for Hadron Spectroscopy at JLab

Session | **Location:** Jefferson Lab, CC F224-225 & Zoom, 12000 Jefferson Ave. Newport News, VA 23606

09:00 – 09:30 **Amplitude extraction with generative AI**

Speaker

Gloria Montana

09:30 – 10:00

Generative-AI for smearing and acceptance unfolding in hadron physics

Speaker

Tareq Alghamdi

10:00 – 10:30 **A Modular Software Stack for A(i)DAPT**

Speaker

Trevor Reed

10:30 AM

11:00 AM

AI for Hadron Spectroscopy at JLab

Session | **Location:** Jefferson Lab, CC F224-225 & Zoom, 12000 Jefferson Ave. Newport News, VA 23606

11:00 – 11:30 **Diffusion Models as Surrogate Event Generators for QCD Analysis**

Speaker

Jitao Xu

11:30 – 12:00 **Moments of two-pion photoproduction and diffusion models**

Speakers

Giorgio Foti, Lukasz Bibrzycki

12:00 – 12:30 **Autoencoders for Partial Wave Analysis**

Speaker

Trevor Reed

12:30 PM

2:00 PM

AI for Hadron Spectroscopy at JLab

Session | **Location:** Jefferson Lab, CC F224-225 & Zoom, 12000 Jefferson Ave. Newport News, VA 23606

14:00 – 14:30 **Towards simulation based inference of hadron structure**

Speaker

Nobuo Sato

14:30 – 15:00 **Neural Networks for QCD**

Speaker

Dr Wyatt Smith

15:00 – 15:30

Variational Neural Network Approach to QFT in the Field Basis: Results from Klein-Gordon Theory

4:00 PM

Speaker
Kevin Braga

15:30 - 16:00

Applications of Density Ratio Estimation in Experimental Hadron Spectroscopy

Speaker
Richard Tyson