Session Program

11–15 May 2026

Digital Twins for Nuclear and Particle physics - NPTwins 2026

Experiment

ECT*, Aula Renzo Leonardi
Strada delle Tabarelle 286, I-38123 Villazzano (Trento)

Monday 11 May

14:30

Experiment

Session | **Location:** ECT*, Aula Renzo Leonardi, Strada delle Tabarelle 286, I-38123 Villazzano (Trento)

14:30–15:00 **AI-Optimized Polarization at Jefferson Lab**

Speaker
Patrick Moran

15:00–15:30

Foundation Models for Fast Simulation and Particle Identification with Cherenkov Detectors

Speaker
James Giroux

15:30

Tuesday 12 May

09:00

Experiment

Session | **Location:** ECT*, Aula Renzo Leonardi, Strada delle Tabarelle 286, I-38123 Villazzano (Trento)

09:00–09:30 **Analysis of nucleon spin structure**

Speaker
Tianbo Liu

09:30–10:00 **Diffusion-based Inference for Inverse Problems in Nuclear and Particle Physics**

Speaker
Yaohang Li

10:00–10:30 **Generative AI for Detector Effect Modeling and Unfolding to Vertex-Level Distributions**

Speaker
Tareq Alghamdi

10:30–11:00 **Coffee break**

11:00–11:30 **Multi-model Mixing via Bayesian Trees**

Speaker
Matthew Pratola

11:30–12:00 **Diffusion models for unfolding detector effects**

Speaker
Giorgio Foti

12:30