Session Program

1–4 Nov 2022

ML4Jets2022

Anomaly Detection

Rutgers University, Multipurpose Room (aka Livingston Hall)
Livingston Student Center

Tuesday 1 November

09:00

Anomaly Detection

Session | **Location:** Rutgers University, Multipurpose Room (aka Livingston Hall), Livingston Student Center |
Conveners: Dylan Sheldon Rankin, Elham E Khoda

09:00–09:25 **Introduction to Anomaly Detection**

Speaker
Dr Barry Dillon

09:25–09:45

Results from Unsupervised Machine Learning in an ATLAS Dijet Resonance Search

Speaker
Julia Lynne Gonski

09:45–10:05 **A Normalized Autoencoder for LHC triggers**

Speaker
Luigi Favaro

10:05–10:25 **Robust anomaly detection using NuRD**

Speaker
Abhijith Gandrakota

10:25–10:45 **Challenges for unsupervised anomaly detection in particle physics**

Speaker
Katherine Fraser

10:45

Wednesday 2 November

14:00

Anomaly Detection
Session | **Location:** Rutgers University, Multipurpose Room (aka Livingston Hall), Livingston Student Center |
Conveners: Dr Barry Dillon, Lawrence Lee Jr

14:00–14:20

CURTAINs for your Sliding Window: Constructing Unobserved Regions by Transporting Adjacent INtervals

Speaker
Johnny Raine

14:20–14:40 **Generative Models for Resonant Anomaly Detection**

Speaker
Elham E Khoda

14:40–15:00 **HEP-Sim2Real: creating background templates with normalizing flows**

Speaker
Radha Mastandrea

15:00–15:20 **Weakly supervised methods for LHC analyses**

Speaker
Thorben Finke

15:20–15:40 **Resonant anomaly detection without background sculpting**

Speaker
Manuel Sommerhalder

15:40

Thursday 3 November

14:00

Anomaly Detection

Session | **Location:** Rutgers University, Multipurpose Room (aka Livingston Hall), Livingston Student Center |
Conveners: David Shih, Yuri Gershtein

14:00–14:20 **Anomaly detection in a perspective of interdisciplinary research**

Speaker
Taoli Cheng

14:20–14:40 **Optimal Mass Variables for Semivisible Jets**

Speaker
Kevin Pedro

14:40–15:00

Neural Embedding: Learning the Embedding of the Manifold of Physics Data

Speaker
Sang Eon Park

15:00–15:20 **Hunting for signals using Gaussian Process regression**

Speaker
Abhijith Gandrakota

15:20