

## **Session Program**

**29 March 2021 to 1 April 2021**



## **X NExT PhD Workshop**

### ***Student Session***

Zoom

# Monday 29 March

16:35

## Student Session: Talks (1). Chair: Nourhan Hendawy, with Stefano Moretti.

Session | Location: Zoom

16:35-16:41

### Charting the Fifth Force Landscape

#### Speaker

Hannah Banks

16:41-16:47

### Quantum Amplitudes and Classical Gravity

#### Speaker

Matteo Sergola

16:47-16:53

### Do we really need to fix the gauge?

#### Speaker

Vlad Mandric

16:53-16:59

### Leading Hadronisation Corrections

#### Speaker

Mr Ryan Wood

16:59-17:05

### Twisted Boundary Conditions in Lattice QCD

#### Speaker

Alessandro Barone

17:05-17:11

### Exploring Multilepton Signatures From Dark Matter at the LHC

#### Speaker

Arran Charles Freegard

17:11-17:17

### Using Machine Learning to find Dark Matter

#### Speaker

Joe Davies

17:17-17:23

### Model Building with Reinforcement Learning

#### Speaker

Thomas Harvey

17:23-17:29

### New Technique for Space Debris Identification and Tracking

#### Speaker

Saeed Vahedikamal

17:35

## Wednesday 31 March

16:00

### Student Session: Talks (2). Chair: Saeed Vahedikamal, with Andrea Banfi.

Session | Location: Zoom

16:00–16:06

#### Use of Kappa Formulation to Achieve a 2HDM Model Type Independent Scanner

##### Speaker

Ciara Byers

16:06–16:12

#### Taking Top-EFT For a Spin

##### Speaker

Ethan Lewis Simpson

16:12–16:18

#### High precision QCD amplitudes

##### Speaker

Piotr Bargiela

16:18–16:24

#### HAL-QCD Approach to Interquark Potentials

##### Speaker

Thomas Spriggs

16:24–16:30

#### Search for $tZq$ production in association with a Z boson in the dilepton final state

##### Speaker

Kathryn Wendy Coldham

16:30–16:36

#### Normalising Flows as Trivialising Maps for Lattice $\phi^4$ Theory

##### Speaker

Joe Marsh Rossney

16:36–16:42

#### Plasma kinetics for plasma medicine applications in cancer treatment

##### Speaker

Nourhan Hendawy

16:42–16:48

#### Lepton Flavour Non-Universality in U(1) Extended MSSMs

##### Speaker

Dr Yasar Hicyilmaz

17:00

# Thursday 1 April

13:00

## Student Session: Virtual poster session

**Session** | **Location:** Zoom | **Conveners:** Stephen West, Jacob Thomas Linacre, Stefano Moretti

13:00-14:00

### Sneutrino DM signals as probe of neutrino seesaw dynamics

#### Speaker

YI LIU

13:00-14:00

### Adaptive Multi Vertex Fitter for Secondary Vertexing

#### Speaker

Neza Ribaric

13:00-14:00

### A new technique for the reconstruction of the interaction vertices inside the CMS detector at HL-LHC.

#### Speaker

Giovanna Salvi

13:00-14:00

### MultiScale Modelling of Vacancy Diffusion Mechanisms Leading to Void Formation

#### Speaker

Vasileios Fotopoulos

13:00-14:00

### Jet Clustering Techniques for New Higgs Boson Searches in Hadronic Final State

#### Speaker

Shubhani Jain

13:00-14:00

### Possibility of a new level of space debris identification and tracking by Microwave Kinetic Inductance Detectors (MKIDs)

#### Speaker

Saeed Vahedikamal

14:00