



# XI NExT PhD Workshop: Probing fundamental physics at colliders and beyond

## Monday, 28 June 2021

### Student talks: Session 1 (15:30 - 16:30)

time	[id] title	presenter
15:30	[31] Matching parton shower and fixed order calculations in the Deductor framework	BODOR, Aron Csaba
15:40	[32] Machine learning for particle physics.	CERRO, Giorgio
15:50	[26] H1jet, a fast program to compute transverse momentum distributions	LIND, Alexander
16:00	[28] Jet Clustering Techniques for New Higgs Boson Searches in Hadronic Final States	JAIN, Shubhani
16:10	[33] A type-independent 2HDM parameter scanner	BYERS, Ciara
16:20	[37] Fermion mass hierarchies from vector-like families with an extended 2HDM and a possible explanation for the electron and muon anomalous magnetic moments	LEE, Huchan

# Tuesday, 29 June 2021

## Student talks: Session 2 (11:10 - 12:00)

time	[id] title	presenter
11:10	[22] Diluting SUSY flavour problem on the Landscape	LAMBA, Priyanka
11:20	[27] Bayesian Methods for $0\nu\beta\beta$ Decay	VAN GOFFRIER, Graham
11:30	[19] Planck-safe U(1)' Extensions Explaining RK(*)	HÖHNE, Tim
11:40	[34] Simulating neutrino beam - using external data to improve the neutrino beam simulation at the NOvA and DUNE experiments	KRALIK, Robert
11:50	[29] Signals from Light Sneutrino Dark Matter at future $e^+e^-$ Colliders	LIU, YI

# Wednesday, 30 June 2021

**Student talks: Session 3 (15:30 - 16:20)**

time	[id] title	presenter
15:30	[35] A new technique for the reconstruction of the interaction vertices inside the CMS detector at HL-LHC.	SALVI, Giovanna
15:40	[18] Vorticity and spin in relativistic heavy-ion collisions	Mr SINGH, Rajeev
15:50	[21] High-mass Drell-Yan measurements at the ATLAS experiment and their phenomenological interpretation	GONZALEZ LOPEZ, Ricardo
16:00	[17] EW Sudakov logarithms and their implementation in OpenLoops	MAI, Lorenzo
16:10	[20] Exploring Multilepton Signatures From Dark Matter at the LHC	FREEGARD, Arran Charles

# Thursday, 1 July 2021

## Student talks: Session 4 (11:10 - 12:00)

time	[id] title	presenter
11:10	[30] Essential renormalization group	BALDAZZI, Alessio
11:20	[24] Constraining asymptotically safe scalar-gravity theories	LINO DOS SANTOS, Rafael Robson
11:30	[36] A new subtraction scheme in perturbative QCD	BERTOLOTTI, Gloria
11:40	[23] Leading Hadronisation Corrections	Mr WOOD, Ryan
11:50	[25] Invisible traces of conformal symmetry breaking	KIERKLA, Maciej

## Student talks: Student talks: session 5 (15:00 - 15:30)

time	[id] title	presenter
15:00	[42] A non-abelian SU(2)_D model of dark matter	THONGYOI, Nakorn
15:10	[43] CP-odd higgs boson search via Zh channel	CHAPMAN, Matthew
15:20	[38] Probing Asymmetric Dark Matter with the CMB	POONI, Charis