

Session Program

15-18 Mar 2021



**International Workshop on Future Linear
Colliders, LCWS2021**

PD1: Theoretical Developments

Zoom, Online Conference

Monday 15 March

17:30

PD1: Theoretical Developments

Session | Location: Zoom, Online Conference

17:30-17:50 **The THDMA revisited**

Speaker

Tania Natalie Robens

17:50-18:10

Exotic Vectorlike Quark Phenomenology in the Minimal Linear Sigma Model

Speaker

Mr Javier Alonso González

18:10-18:30

Improved muon (g - 2) Measurements and Supersymmetry at existing and future colliders

Speakers

Manimala Chakraborti, Manimala Chakraborti

18:30-18:50 **Family Non-Universal UMSSM at the Linear Colliders**

Speaker

Dr Yasar Hicyilmaz

18:50-19:10 **Brane-Higgs sensitivities**

Speaker

Grégory Moreau

19:10-19:30 **Neutrino Masses and Hubble Tension via a Majoron in MFV**

Speaker

Fernando Arias Aragón

19:30

22:00

PD1: Theoretical Developments

Session | Location: Zoom, Online Conference | **Conveners:**

Roberto Franceschini, Shigeki Matsumoto, Sven Heinemeyer, Nathaniel Craig, Jürgen Reuter

22:00-22:30 **Importance of Z-pole and WW running for LC physics**

Speakers

Ayres Freitas, Enrico Fermi

22:30-22:50

Forward-backward asymmetries of heavy quark pair production in e^+e^- collisions at $\mathcal{\alpha_s^2}$

Speaker

Dr Long Chen

22:50-23:10 **Zooming in on compositeness at the TeraZ**

Speaker

Abhishek Iyer

23:10-23:30

Subleading Logarithmic QED Initial State Corrections to $e^+ + e^- \rightarrow \gamma^*/Z^*$ **Speaker**

Kay Schönwald

23:30-23:50

Importance of fermion loops in Vector Boson Scattering**Speaker**

Mr Carlos Quezada Calonge

23:59

Tuesday 16 March

17:30

PD1: Theoretical Developments

Session | Location: Zoom, Online Conference

17:30-18:00 **BSM physics at LCs**

Speaker

Georg Ralf Weiglein

18:00-18:20 **Precise calculations of charged Higgs boson decays in NMSSM**

Speaker

Kodai Sakurai

18:20-18:40 **Triple Higgs couplings in the 2HDM at future linear colliders**

Speaker

Francisco Arco

18:40-19:00 **Testing the THDMS**

Speaker

Steven Paasch

19:00-19:20 **A 96 GeV Higgs Boson in the 2HDMs**

Speaker

Cheng Li

19:29

Wednesday 17 March

17:30

PD1: Theoretical Developments

Session | Location: Zoom, Online Conference

17:30-18:00 **Top precision physics at LCs**

Speaker

Andre Hoang

18:00-18:20

Top quark mass and physics beyond the standard model from Higgs Parity

Speaker

Dr Keisuke Harigaya

18:20-18:40

Improved strong coupling determinations from hadronic decays of electroweak bosons at N^3LO accuracy

Speaker

David d'Enterria

18:40-19:00 **Precision top mass measurement**

Speaker

Dr Aditya Pathak

19:00-19:20

On the evaluation of two-loop electroweak box diagrams for $e^+e^- \rightarrow HZ$ production

Speaker

Qian Song

19:29

Thursday 18 March

06:00

PD1: Theoretical Developments

Session | Location: Zoom, Online Conference

06:00-06:20

Probing extended Higgs sectors by the synergy between the LHC and the ILC

Speaker

Kentarou Mawatari

06:20-06:40

Probing light quark Yukawa couplings through angularity distributions in Higgs boson decay

Speaker

Dr Bin Yan

06:40-07:00

Phenomenology of Minimal Leptophilic Dark Matter Models at Linear Colliders

Speaker

Dr Adil Jueid

07:00-07:20

Leptophilic fermion WIMP ~Role of future lepton colliders~

Speaker

Dr Ipsita Saha

07:20-07:40

Possibility of a general U(1) extended theory and its implications

Speaker

Arindam Das

07:40-08:00

Linear Collider Signals of Z' bosons in GUT inspired Gauge-Higgs Unification

Speaker

Naoki Yamatsu

08:00

09:00

PD1: Theoretical Developments

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Roberto Franceschini, Jürgen Reuter, Shigeki Matsumoto, Nathaniel Craig, Sven Heinemeyer

09:00-09:30

Higgs precision calculations for e+e- colliders

Speaker

Shinya KANEMURA

09:30-09:50

Two-loop corrections to the Higgs trilinear coupling in BSM models with classical scale invariance

Speaker

Dr Johannes Braathen

09:50-10:10

A light boson search at linear colliders

	Speaker Dr Tanmoy Mondal
10:30	10:10-10:30 Aligned Higgs couplings originated from the twisted custodial symmetry at high energies
	Speaker Masashi Aiko
11:00	PD1: Theoretical Developments Session Location: Zoom, Online Conference Conveners: Sven Heinemeyer, Shigeki Matsumoto, Nathaniel Craig, Jürgen Reuter, Roberto Franceschini
	11:00-11:30 Precision calculations and tools for e+e- colliders
	Speaker Wolfgang Kilian
	11:30-11:50 Using a collinear factorisation approach at e+e- colliders
	Speaker Stefano Frixione
	11:50-12:10 Next-to-leading-power factorization in QED: a diagrammatic approach
	Speaker Lorenzo Zoppi
12:30	12:10-12:30 WHIZARD 3.0: Status and News
	Speaker Pascal Stienemeier