

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 \sqrt{s}

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 $e^+ e^- \rightarrow \gamma^* Z^0$ **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 N³LO 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

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

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

10:10–10:30

Aligned Higgs couplings originated from the twisted custodial symmetry at high energies**Speaker**

Masashi Aiko

10:30

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

12:10–12:30

WHIZARD 3.0: Status and News**Speaker**

Pascal Stenemeier

12:30