



ILD meeting
07.05.2024

ILD Publication & Speakers Bureau

Report

Conferences & Workshops

2 recent contributions

- **CEPC Workshop EU edition** (8-11 April 2024, Marseille, France)

<https://indico.in2p3.fr/event/20053/>

1. I. Bozovic, Integrated luminosity measurement at ILC: What can be learnt for CEPC?
2. F. Zarnecki, Light Higgs bosons at CEPC – experiment (based on ILD results)

Incoming Conferences/submitted (20)

SUSY2024 (10-14 June 2024, Madrid, Spain)

<https://indico.cern.ch/event/1354279/>

1. Jesús P. Márquez, Probing GHU models at the ILC with di-quark AFB at c.m.e. above the Z mass

Incoming Conferences/submitted (23)

LCWS2024 (8-11 July 2024, Tokyo, Japan)

- <https://agenda.linearcollider.org/event/10134/>
- **Abstract** submission: **deadline 26 April**
- **12 submitted ILD related abstracts**
 1. Jan Klamka et al., Long-lived particle searches with the ILD experiment
 2. Maria Teresa Nunez Pardo De Vera et al., Stau searches at future e+e- colliders
 3. Zhijie Zhao et al., Impact of NLO QCD on Key Physics Processes at Future Higgs Factories
 4. Antoine Laudrain et al., Beam background at an Asymmetric Higgs Factory
 5. Andre Sailer et al., Towards production readiness with the Key4hep software stack for future colliders
 6. Junping Tian et al., Searching for heavy neutral leptons through exotic Higgs decays at the ILC
 7. Adrian Irlles et al., Probing GHU models at the ILC with di-quark AFB at c.m.e. above the Z mass
 8. Jurina Nakajima et al., Finding kink signatures of LLPs in TPC at ILC
 9. Risako Tagami et al., Application of Particle Transformer to quark flavor tagging in the ILC project
 10. Jenny List et al., Towards an update of the ILD ZHH analysis
 11. Konrad Helms et al., Fast Timing for Particle ID
 12. Andre Filipe Silva et al., Searching for new physics in WW and single-W events

ICHEP 2024 (Prague, 18-24 July 2024)

<https://ic hep2024.org>

10 accepted contributions
7 talks (2 Higgs, 2 top/EW, 2 detectors/1 computing)
3 posters (BSM)

1. Ivanka Bozovic, Probing CPV mixing in the Higgs sector in VBF at 1 TeV ILC , paper reviewed, accepted **PARALLEL**, Higgs Physics
2. Filip Zarnecki, Search for Exotic Scalars at the International Linear Collider, accepted, **PARALLEL**, Higgs Physics
3. A. Irlles/Jesus Pedro Marquez Hernandez, Probing GHU models at the ILC with di-quark AFB at c.m.e. above the Z mass, accepted, **PARALLEL**, Top quark and EW Physics
4. Krzysztof Mekala, Prospects for constraining lightquark electroweak couplings at Higgs factories, accepted, **PARALLEL**, Top Quark and Electroweak Physics
5. Maria Teresa Nunez Pardo De Vera, Stau searches at future e+e- colliders, accepted as **POSTER**, Beyond the Standard Model
6. Jan Franciszek Klamka (FZ), Long-lived particle searches with the ILD experiment, accepted, **POSTER**, Beyond the Standard Model
7. Emanuela Musumeci, Probing New Physics at future e+e- colliders with two-particle angular correlations, **POSTER**, Beyond the Standard Model
8. Kiyotomo Kawagoe (to be proposed by ET), The International Large Detector as Detector Concept for Linear and Circular e+e- Colliders, accepted, **PARALLEL**, Detectors for Future Facilities, R&D, Novel Techniques
9. Taikan Suehara, High level reconstruction with deep learning at ILD full simulation, accepted, **PARALLEL**, Computing, AI and Data Handling
10. Antoine Laudrain, Physics Performance and Detector Requirements at an Asymmetric Higgs Factory, **PARALLEL**, Detectors for Future Facilities, R&D, Novel Techniques

Topical papers submitted to journals (1)

1. **Probing Gauge-Higgs Unification models at the ILC, with AFBb and AFBc above the Z-pole**
 - Authors: A. Irlles, Roman Poeschl, F. Richard *et al.* (including a few theorists)
 - Reviewers: Mikael Berggren and Daniel Jeans (replacing Keisuke Fujii)
 - This is a ILD public note: ILD-PHYS-PUB-2023-001,
 - Published as arXiv (<https://arxiv.org/abs/2306.11413>)
 - Under review by the Eur. Phys. J. C

Topical papers under internal reviewing (3)

1. Probing CPV mixing in the Higgs sector in VBF at 1 TeV ILC
 - Authors: N. Vukasinovic, Ivanka Bozovic, Goran Kacarevic
 - Reviewers: Daniel Jeans and Filip Zarnecki
 - Reviewing completed
 - To be submitted to the Phys. Rev. D (ILD-PHYS-2024-002)
2. Energy and Time Histograms: Fluxes determination in calorimeters
 - Authors: Vincent Boudry and Khalid Hassouna
 - Reviewers: Alberto Ruiz and Taikan Suehara
 - Ongoing reviewing
3. Searching for LLP at the ILD
 - Authors: Jan Klamka, Filip Zarnecki
 - Submitted to the PSB
 - Reviewers assigned (Mikael Berggren, Peter Kluit)

Topical papers in progress (4)

1. The SUSY reach of Higgs Factories in the most challenging scenario: scalar τ -leptons with lowest cross-section and small mass differences.
 - Authors: Mikael Berggren *et al.*
 - Reviewers: [Alberto Ruiz and Taikan Suehara](#)
2. Search for low mass scalar particles
 - Authors: Yan Wang *et al.*
 - Reviewers: [Junping Tian and Kiyotomo Kawagoe](#)
3. Sensitivity to anomalous VVH couplings at the ILC
 - Authors: Junping Tian, Tomohisa Ogawa *et al.*
 - Reviewers [Jenny List and Ivanka Bozovic](#)
4. Strange quark as a probe for new physics in the Higgs sector
 - Authors: Matthew Basso, Valentina Cairo
 - Reviewers: [Alberto Ruiz and Ulrich Einhaus](#)

Summary

Current status of ILD publications and talks (as of April 2024)

ILD papers	in progress	under review	published
	4	4	0

ILD talks	given	submitted/accepted
	2	23