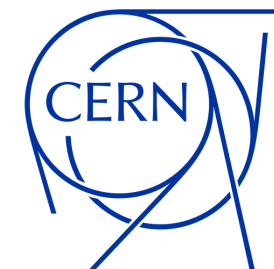


IDT-WG3 News



ilc international development team

Jenny List
ILC Europe meeting
4 October 2023



Reminder:

WG3 Organisation and mandates

Chair: Jenny List (DESY/CERN)

Deputies: Roman Pöschl (IJCLab), Michael Peskin (SLAC), Daniel Jeans (KEK), Jinlong Zhang (ANL)

Coordinator and Deputy coordinator(s)

Steering Group

Subgroup conveners, Coordinator and Deputy Coordinator(s)

Kiyotomo Kawagoe (Kyushu),
Carsten Hensel (Rio de Janeiro),
Ivanka Božović Jelisavčić (Belgrade)

Speaker's bureau

Andy White (UT Arlington), Ties Behnke (DESY), Yuanning Gao (Peking), Frank Simon (MPP), Jim Brau (Oregon), Taikan Suehara (Kyushu), Phil Burrows (Oxford), Francesco Forti (INFN), Filip Zarnecki (Warsaw), Shoji Asai (U Tokyo),
Patty McBride (Fermilab), Mihoko Nojiri (KEK), Timothy Nelson (SLAC), Kajari Mazumdar (Mumbai), Phillip Urquijo (Melbourne), Dmitri Denisov (Brookhaven), Hitoshi Murayama (Berkeley/Tokyo), Claude Vallee (Marseille)

Interface with machine

Coordinate the interactions between the accelerator and facility infrastructure planning and the needs of the experiments

Karsten Buesser (DESY), Tomoyuki Sanuki (Tohoku),
Roman Poeschl (IJCLab), Tom Markiewicz (SLAC)

Detector and technology R&D

Provide a forum for discussion and coordination of the detector and technology R&D for the future experimental programme

Marcel Vos (Valencia), Katja Krueger (DESY)
Jinlong Zhang (ANL), Shinya Narita (Iwate)

Software and computing

Promote and provide coordination of the software development and computing planning

Frank Gaede (DESY), Jan Strube (PNNL)
Daniel Jeans (KEK)

Physics potential and opportunity

Encourage and develop ideas for exploiting the physics potential of the ILC collider and by use of the beams available for more specialised experiments

Michael Peskin (SLAC), Junping Tian (Tokyo)
Aidan Robson (Glasgow)

IDT WG3 - Speakers Bureau

ILC Talks etc

- very active Speakers' Bureau <https://linearcollider.org/team/wg3/speakers-bureau/> , idt-wg3-sb@ml.post.kek.jp
- e.g. organized plenary talks at
 - Higgs Hunting 2023 <https://indico.ijclab.in2p3.fr/event/9063/>
 - Scalars 2023 <http://indico.fuw.edu.pl/conferenceDisplay.py?ovw=True&confId=66>
 - African Conference on High Energy Physics (ACHEP) <https://indico.marwan.ma/event/1/>
 - Higgs 2023 <https://indico.ihep.ac.cn/event/18025/>
- **looking for an ILC speaker at HeavyQuarks&Leptons Conference (Nov 28-Dec2 in Mumbai)**
- 30th Cracow Epiphany Conference on Precision Physics at High Energy Colliders (Epiphany2024) <https://epiphany.ifj.edu.pl/epiphany2024/>
IFJ PAN, Krakow, Poland, 8-12 January 2024

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Please let them know

- if you'd be available to give a talk (always looking for speakers!)
- if you've been invited to give a talk
- if you spot a conference where ILC should be present

IDT WG3

Physics Opportunities

- **WG3 Open Physics meetings**

- continue to be well attended
- indico category
<https://agenda.linearcollider.org/category/266/>
- last: October 19 with highlights from 2nd ECFA WS
- next: November 16, 11pm CET
(agenda WIP, probably includes talk on HALHF)

- **hook up to ECFA Focus Topics**

- **start discussions towards LCWS**

IDT-WG3-Phys Open Meeting

📅 Thursday 19 Oct 2023, 15:00 → 16:59 Europe/Zurich

Description Topic: IDT-WG3-Phys Open Meeting

Join Zoom Meeting


<https://desy.zoom.us/j/84806732791>

Meeting ID: 848 0673 2791

Passcode: 314159

15:00 → 15:30 **Challenges and Solutions in Reconstructing Higgs Decays to Heavy Flavour Jets**

Speaker: Leonhard Reichenbach (CERN / University of Bonn (DE))

 231013_ECFA_DESY...

15:30 → 16:00 **"Here be SUSY" - Prospects for SUSY searches at future colliders**

Speaker: Mikael Berggren (Deutsches Elektronen-Synchrotron (DE))

 berggren-idt-wg3-su...

16:00 → 16:30 **Precision absolute luminosity with photon pairs**

Speaker: Graham Wilson

 IDT-WG3_PL_GWW_...

IDT WG3


Software & Computing

- **next topical meeting:**

- **Advanced Flavour Tagging: follow-up** Tue Nov 21, 1-3pm CET, <https://agenda.linearcollider.org/event/10213/>

- **working towards:**

- **common mechanism to train and apply ML-based tools in Marlin processors / Gaudi algorithms**



Advanced jet flavour tagging: follow-up

Tuesday 21 Nov 2023, 13:00 → 15:00 Europe/Zurich

13:00 → 13:15 **Jet origin identification using Particle Net** ¶
Speakers: Manqi RUAN (IHEP-LLR/CERN), Manqi Ruan (Chinese Academy of Sciences (CN))

13:20 → 13:35 **Flavor tagging with Graph Neutral Network**
Speaker: Taikan Suehara (ICEPP, The University of Tokyo)

13:40 → 13:55 **Machine Learning Flavour Tagging**
Speaker: Mareike Meyer

IDT WG3

Detector Technologies & MDI Groups

Detector Technologies:

- plan to continue topical meetings, eg on fast timing detectors
- **DRD Collaborations:**
collect information about representation of R&D targets relevant for ILC

MDI:

- typically very project-specific, extremely hard to impossible to find funding for ILC-specific studies
- attended ITN Information Meeting, try to team up with WPs 15' & 16'
- also try to exploit Belle-II synergies

P5

news in December

- P5 report will be presented at HEPAP meeting Dec 7/8
 - agenda <https://science.osti.gov/-/media/hep/hepap/pdf/202312/HEPAP-agenda-Dec-7-8-2023.pdf>
 - zoom participation possible after registration
- Town Hall meeting at Fermilab to discuss P5 outcome Dec 11
 - <https://indico.fnal.gov/event/61641>
 - in-person or zoom participation possible

- July 8-11 in Tokyo <https://agenda.linearcollider.org/event/10134>
- July 12 for satellite meetings
- had first meeting of PC, next to follow Dec 13
- significant contributions from WG3 areas, will be regular topic at WG3 steering group meetings

Program Committee (PC)

(only listing confirmed members)

Sergey Belomestnikh (FNAL)

Phil Burrows (U. Oxford, co-chair)

Nathaniel Craig (UC Santa Barbara)

Motoi Endo (KEK)

Angeles Faus-Golfe (IJCLab)

Jie Gao (IHEP)

Masaya Ishino (U. Tokyo)

Daniel Jeans (KEK, chair)

Andy Lankford (UC Irvine)

Benno List (DESY)

Jenny List (DESY)

Tom Markiewicz (SLAC)

Shinichiro Michizono (KEK, co-chair)

Laura Monaco (INFN Milano)

Emilio Nanni (SLAC, co-chair)

Shinya Narita (Iwate U.)

Yasuhiro Okada (KEK)

Roman Poeschl (IJCLab)

Aidan Robson (U. Glasgow)

Frank Simon (KIT)

Steinar Stapnes (CERN)

Tohru Takahashi (Hiroshima U.)

Geoff Taylor (U. Melbourne)

Makoto Tomoto (KEK)

Caterina Vernieri (SLAC)

Akira Yamamoto (KEK)