

## List of Selected Publications

A full list of my publications is available [at this link](#).

1. **B. Dudar, J. List, U. Einhaus and R. Ete**, “Prospects of fast timing detectors for particle identification at future Higgs factories,” [arXiv:2105.12495 \[hep-ex\]](#)  
proceedings on ongoing work under my guidance
2. **J. Beyer and J. List**, “Isolating systematic effects with beam polarisation at  $e^+e^-$  colliders,” [arXiv:2105.09691 \[hep-ex\]](#)  
proceedings on ongoing work under my guidance
3. **Y. Radkhorrani and J. List**, “Conceptual aspects for the improvement of the reconstruction of  $b$ - and  $c$ -jets at  $e^+e^-$  Higgs Factories with ParticleFlow detectors,” [arXiv:2105.08480 \[hep-ex\]](#)  
proceedings on ongoing work under my guidance
4. **M. T. Núñez Pardo de Vera, M. Berggren and J. List**, “ $\tilde{\tau}$  searches at the ILC,” [arXiv:2105.08616 \[hep-ph\]](#)  
proceedings on ongoing work under my guidance
5. **H. Abramowicz *et al.***, “Conceptual Design Report for the LUXE Experiment,” [arXiv:2102.02032 \[hep-ex\]](#)  
Personal Contributions: Consultant for more detailed design and costing of the Cherenkov detector for high-flux electron detection and reconstruction technique for Compton edge positions based on the paper in the item below.
6. **M. Berggren, S. Caiazza, M. Chera and J. List**, “Kinematic edge detection using finite impulse response filters,” [Nucl. Instrum. Meth. A 1010 \(2021\), 165555](#)  
Journal publication on a reconstruction technique developed under my guidance.
7. **S. Kawada, J. List and M. Berggren**, “Prospects of measuring the branching fraction of the Higgs boson decaying into muon pairs at the International Linear Collider,” [Eur. Phys. J. C 80 \(2020\) no.12, 1186](#)  
Journal publication on analysis performed under my guidance.
8. **K. Fujii *et al.***, “ILC Study Questions for Snowmass 2021,” [arXiv:2007.03650 \[hep-ph\]](#)  
Personal Contributions: Main author of the section on simulation tools and datasets, further contributions to nearly all other sections.
9. **ILD Detector Concept Group**, “International Large Detector: Interim Design Report,” [arXiv:2003.01116 \[physics.ins-det\]](#)  
Personal Contributions: Main author of the chapter on physics benchmarking and coordination of the studies presented therein.
10. **M. Habermehl, M. Berggren and J. List**, “WIMP Dark Matter at the International Linear Collider,” [Phys. Rev. D 101 \(2020\) no.7, 075053](#)  
Journal publication on a PhD thesis supervised by me.
11. **H. Baer, M. Berggren, K. Fujii, J. List, S. L. Lehtinen, T. Tanabe and J. Yan**, “ILC as a natural SUSY discovery machine and precision microscope: From light Higgsinos to tests of unification,” [Phys. Rev. D 101 \(2020\) no.9, 095026](#)  
Joint experiment-phenomenological study initiated by me. The SUSY parameter determination studies were conducted as a part of a PhD thesis under my supervision.
12. **H. Abramowicz *et al.***, “Letter of Intent for the LUXE Experiment,” [arXiv:1909.00860 \[physics.ins-det\]](#)  
Personal Contributions: Proposal, preliminary design and costing for Cherenkov detector for high-flux electron detection.

13. **LCC Physics Working Group**, “Tests of the Standard Model at the International Linear Collider,” [arXiv:1908.11299 \[hep-ex\]](#)  
Personal Contributions: Main author of the chapter on systematic uncertainties and the influence of beam polarisation, further contributions to nearly all other chapters.
14. **P. Bambade *et al.***, “The International Linear Collider: A Global Project,” [arXiv:1903.01629 \[hep-ex\]](#)  
Personal Contributions: Main author of the chapters on ILC operating scenarios and on systematic uncertainties, beam polarisation and the physics potential of measurements of di- and four-fermion processes. Further contributions to other chapters.
15. **LCC Physics Working Group**, “The role of positron polarization for the initial 250 GeV stage of the International Linear Collider,” [arXiv:1801.02840 \[hep-ph\]](#)  
Lead author and coordinator of this publication of the LCC Physics Working Group.
16. **T. Barklow, K. Fujii, S. Jung, R. Karl, J. List, T. Ogawa, M. E. Peskin, J. Tian**, “Improved Formalism for Precision Higgs Coupling Fits,” [Phys. Rev. D 97 \(2018\) no.5, 053003](#)  
Personal Contributions: Projections of expected precisions on charged triple gauge couplings, role of beam polarisation and sensitivity to beyond the standard model physics from Higgs precision measurements.
17. **LCC Physics Working Group**, “Physics Case for the 250 GeV Stage of the International Linear Collider,” [arXiv:1710.07621 \[hep-ex\]](#)  
Personal Contributions: Main author of the chapters on ILC operating scenarios and on sensitivity to beyond the standard model physics from Higgs precision measurements. Further contributions to other chapters.
18. **LCC Physics Working Group**, “The Potential of the ILC for Discovering New Particles,” [arXiv:1702.05333 \[hep-ph\]](#)  
Lead author and coordinator of this publication of the LCC Physics Working Group.
19. **B. Vormwald, J. List and A. Vauth**, “A calibration system for Compton polarimetry at  $e^+e^-$  linear colliders,” [JINST 11 \(2016\) no.01, P01014](#)  
Journal publication on a PhD thesis supervised by me.
20. **M. Berggren, A. Cakir, D. Krücker, J. List, I. A. Melzer-Pellmann, B. Safarzadeh Samani, C. Seitz and S. Wayand**, “Non-simplified SUSY:  $\tilde{\tau}$ -coannihilation at LHC and ILC,” [Eur. Phys. J. C 76 \(2016\) no.4, 183](#)  
Joint LHC-ILC study on a full SUSY model together with DESY and KIT colleagues from the CMS collaboration.
21. **T. Barklow, J. Brau, K. Fujii, J. Gao, J. List, N. Walker and K. Yokoya**, “ILC Operating Scenarios,” [arXiv:1506.07830 \[hep-ex\]](#)  
Publication of the „Joint Working Group on ILC Beam Parameters“ (mandated by the Linear Collider Collaboration (LCC)). Personal Contributions: Analysis of the interplay between data sets with different centre-of-mass energies, integrated luminosities and beam polarisations with respect to Higgs precision measurements, resulting in the definition of the canonical ILC operating scenario.
22. **J. List, A. Vauth and B. Vormwald**, “A Quartz Cherenkov Detector for Compton-Polarimetry at Future  $e^+e^-$  Colliders,” [JINST 10 \(2015\) no.05, P05014](#)  
Journal publication on a PhD thesis supervised by me.
23. **M. Beckmann, J. List, A. Vauth and B. Vormwald**, “Spin Transport and Polarimetry in the Beam Delivery System of the International Linear Collider,” [JINST 9 \(2014\) P07003](#)  
Journal publication on a PhD thesis supervised by me.
24. **B. Vormwald and J. List**, “Bilinear  $R$  parity violation at the ILC: neutrino physics at colliders,” [Eur. Phys. J. C 74 \(2014\) 2720](#)  
Journal publication on a PhD thesis supervised by me.

25. **M. Berggren, F. Brümmer, J. List, G. Moortgat-Pick, T. Robens, K. Rolbiecki and H. Sert,** “Tackling light higgsinos at the ILC,” [Eur. Phys. J. C 73 \(2013\) no.12, 2660](#)  
Joint experiment-phenomenological study initiated by me. The detector-level simulation studies were conducted as a part of a PhD thesis supervised by me.
26. **H. Baer and J. List,** “Post LHC8 SUSY benchmark points for ILC physics,” [Phys. Rev. D 88 \(2013\) 055004](#)  
Joint experiment-phenomenological publication on the impact of searches for SUSY at the LHC.
27. **The International Linear Collider Technical Design Report, 2013, ILC TDR website**  
Personal Contributions: “Volume 2 – Physics”: Main author (Experiment) of Chapter 7 “Supersymmetry” (Theory: Howie Baer); “Volume 4 – Detectors”: Main author of section 2.4 “Beam Instrumentation” and co-organiser of the physics benchmarking studies for the ILD detector concept described in section 6.3 beschrieben (the main editor of this Abschnitts is a member of my group at DESY).
28. **C. Bartels, M. Berggren and J. List,** “Characterising WIMPs at a future  $e^+e^-$  Linear Collider,” [Eur. Phys. J. C 72 \(2012\) 2213](#)  
Journal publication on a PhD thesis supervised by me.
29. **C. Bartels, J. Ebert, A. Hartin, C. Helebrant, D. Käfer and J. List,** “Design and Construction of a Cherenkov Detector for Compton Polarimetry at the ILC,” [JINST 7 \(2012\) P01019](#)  
Journal publication on a PhD thesis supervised by me.
30. **F. D. Aaron *et al.* [H1 Collaboration],** “Search for first generation leptoquarks in  $ep$  collisions at HERA,” [Phys. Lett. B 704 \(2011\) 388](#)  
Journal publication on a PhD thesis supervised by me.
31. **M. Beckmann, B. List and J. List,** “Treatment of Photon Radiation in Kinematic Fits at Future  $e^+e^-$  Colliders,” [Nucl. Instrum. Meth. A 624 \(2010\) 184](#)  
Journal publication on a diploma thesis supervised by me.
32. **K. Ehret *et al.* [ALPS Collaboration],** “Resonant laser power build-up in ALPS: A ‘Light-shining-through-walls’ experiment,” [Nucl. Instrum. Meth. A 612 \(2009\) 83](#)  
Personal contributions: Acquired the laser for the ALPS experiment and conceptual contributions to the calculations of the expected sensitivity of the experiment.