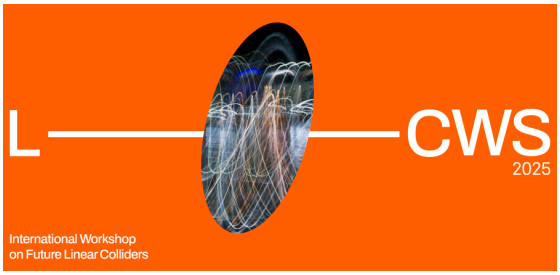

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Key4hep for linear collider studies - where we are and where we want to go

Thursday 23 October 2025 12:15 (15 minutes)

The Key4hep software ecosystem provides a common software stack for studying the physics potential at future collider facilities. It provides all the necessary tools for physics studies ranging from event generation and detector simulation to reconstruction and analysis. The shared effort of several communities, including ILC, CLIC, FCC and CEPC, have made Key4hep the de-facto standard for future collider studies.

In this presentation we give a brief introduction into the Key4hep effort and an overview of the current status. We emphasise topics and developments that are of particular interest for the linear collider communities, including the most recent developments of migrating some of the existing reconstruction and analysis software that has been developed in the last 15 years by the linear collider communities. Additionally, we present our mid- to longterm future plans, where we also flesh out some of the topics that we think are crucial for sustaining the effort and where we expect to also engage the community as a whole to help reach these goals.

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