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The Key4hep turnkey software stack for future colliders

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Detector optimisation and physics performance studies are an integral part for the development of future collider experiments.

The Key4hep project aims at providing a common stack of easy to use software tools for future, or even present, High Energy Physics projects. Key4hep is to a large extent based on software tools that are already very actively used in the community like ROOT, Geant4 and DD4hep or those that are currently under active development like EDM4hep or ACTS. The Key4hep project is, among others, supported by the HEP Software Foundation, CERN, DESY and the AIDAInnova project and has active developers from all large future collider projects: CEPC, CLIC, FCC, and ILC.

In this talk we present an overview on the Key4hep project and describe the ongoing adaptation processes of the different future experiments, thereby showing that Key4hep is a viable long term solution as baseline software for high energy experiments that will facilitate the scientific exchange between these communities in the coming years.

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Collaboration / Activity

ILC

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