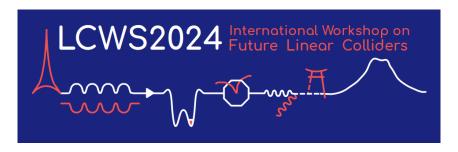
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Unconventional Searches of Exotic particles at Future Linear Colliders

Tuesday, 9 July 2024 15:00 (20 minutes)

Current collider experiments, such as LHC have been studying the production of the BSM particles and their decay to the Standard Model particles. These searches have placed strong constraints on different BSM models as well as on the mass of BSM particles. The situation demands to look for alternative scenarios. BSM theories such as the Pati Salam Model, Composite Higgs, and others suggest that the interaction among different BSM particles exists such that the exotic particle of one type decays to the exotic particle of type two first then to the SM particles. This in turn reveals exciting new signatures. Now, due to the long decay chain, a large number of particles are present at the final state. If the final state is accompanied by a large number of jets, then linear colliders offer a much cleaner environment to study them. Moreover, photon-photon fusion also provides a large cross-section. In this talk, I will discuss some of these alternative searches of exotic fermion and scalars at future colliders such as the International Linear Collider and photon photon collider.

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Primary author: Dr KUMAR, Nilanjana (CCSP, SGT University, India)

Presenter: Dr KUMAR, Nilanjana (CCSP, SGT University, India)

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