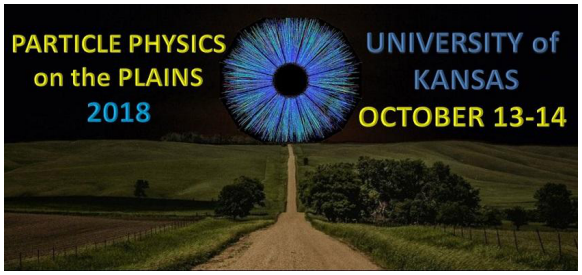

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Lepton flavor violation induced by a neutral scalar at future lepton colliders

Saturday 13 October 2018 15:00 (20 minutes)

Many new physics scenarios beyond the Standard Model often necessitate the existence of a (light) neutral scalar H, which might couple to the charged leptons in a flavor violating way, while evading all existing constraints. Such scalars could be effectively produced at future lepton colliders like CEPC, ILC, FCC-ee and CLIC, either on-shell or off-shell, and induce lepton flavor violating (LFV) signals. We find that a large parameter space of the scalar mass and the LFV couplings can be probed, well beyond the current low-energy constraints in the lepton sector. The neutral scalar explanation of the muon g-2 anomaly could also be directly tested at these colliders.

Authors: Dr ZHANG, Yongchao; MOHAPATRA, Rabindra (University of Maryland); DEV, Bhupal (Washington University in St. Louis)

Presenter: Dr ZHANG, Yongchao

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