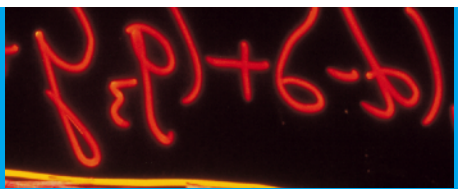
DESY
Particle and Astroparticle Physics Colloquium

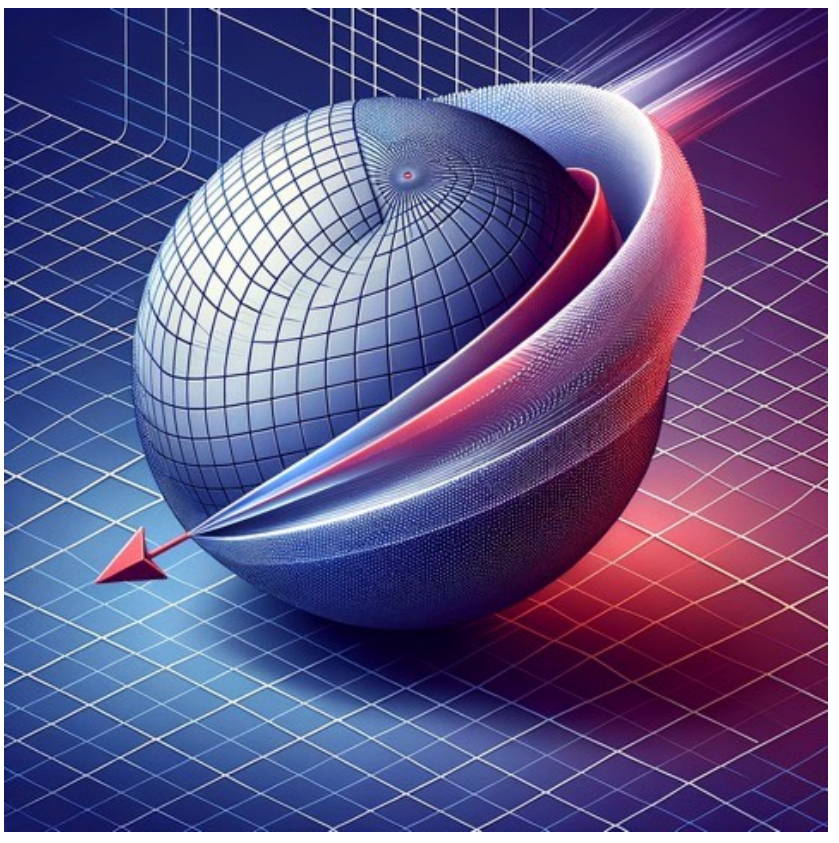


Learning New Tricks with the Higgs.

Tuesday, 13 February, 2024
Auditorium & Webcast 16:00 h

Christoph Englert (University of Glasgow)

Some 10 years after the Higgs boson's discovery at the LHC, a microscopic understanding of the nature of the electroweak scale is still evading us. This is particularly puzzling as we know that the Standard Model (SM) of Particle Physics cannot be the final answer given its obvious shortfalls. In this talk, I will discuss ways to move, with theoretical precision, away from constraining phenomenological patterns of the electroweak scale as predicted by the SM. I will discuss how such an approach can and will continue to inform the search for physics beyond the SM, geo-metrically charting particle physics at the TeV scale. Furthermore, I will show how similar approaches to long-established new physics scenarios such as two Higgs doublet models can remove tension from Higgs measurements and current exotics searches, highlighting discovery opportunities at the LHC.



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