## Theory challenges for LHC physics



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## Identifying large extra dimensions in diphoton and dilepton production at the Large Hadron Collider

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The prospects of discovery and identification of large extra spatial dimensions effects in the process of lepton and photon pair production at the Large Hadron Collider (LHC) were studied. These effects can be found by the specific behavior of the invariant mass distributions of the lepton and photon pairs. Identification of the effects under study can be performed with angular distributions of lepton and photon pairs. Discovery and identification reach on the mass scale parameter  $M_S$  can be obtained for graviton Kaluza – Klein towers in lepton and photon pair production processes at the LHC.

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