

# Flavor and CP violation in a warped extra dimension and their relaxation

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Warped extra dimensions (WED) are among the most popular alternatives to supersymmetry for addressing the gauge hierarchy problem. In addition, they simultaneously allow for an elegant explanation of the observed fermion mass hierarchy and hierarchical quark mixing by virtue of wave function overlaps along the extra (spatial) dimension.

Strong constraints on models with WED come from electroweak precision measurements and flavor and CP violating observables like

the neutron EDM,  $\epsilon_K$  and  $\epsilon'/\epsilon$ ,  $b \rightarrow s\gamma$  and more. In this talk I will review the most important features of flavor physics in a warped extra dimensional setup and discuss the structure of new physics contributions to the aforementioned observables in the general (anarchic) case. Subsequently, I will discuss the role of additional flavor symmetries in relaxing the constraints on the scale of new physics. In particular, I shall describe the RS-A4 model, aimed at a unified explanation of fermion masses and mixings (including neutrinos) within a custodial warped extra dimensional setup. The relaxation of the most relevant constraints in comparison with the anarchic case will then be further discussed.

**Primary author:** Dr KADOSH, Avihay (University Of Groningen)

**Presenter:** Dr KADOSH, Avihay (University Of Groningen)

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