

Abstract Submitted
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Einstein-Yang-Mills-Dirac systems from the discretized Kaluza-Klein theory KAMESHWAR WALI, Syracuse University, NGUYEN ALI VIET, ITI Vietnam National University — A unified theory of the non-Abelian gauge interactions with gravity in the framework of a discretized Kaluza-Klein theory is constructed with a modified Dirac operator and wedge product. All the couplings of chiral spinors to the non-Abelian gauge fields emerge naturally as components of the coupling of the chiral spinors in the generalized gravity together with some new interactions. In particular, the currently prevailing gravity-QCD quark and gravity-electroweak-quark and lepton models are shown to follow as special cases of the general framework.

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