

Abstract Submitted
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Adjoint matter, affine Lie algebras and MCRG JOEL GIEDT, Rensselaer Polytech Inst — Adjoint matter appears prominently in grand unified theories, extended supersymmetry field theories, conformal and quasi-conformal theories related to dynamical electroweak symmetry breaking and composite Higgs models. But is it possible to get it from compactifications of string/M theory, and if so, what are the constraints that come from this underlying theory? What are the implications of an $N=2$ or $N=4$ sector in a semi-realistic string-inspired model that also contains a chiral gauge theory accommodating the Standard Model? Can dark matter be “unparticles?” I will address these questions, along with what we have learned from lattice gauge theory about nonperturbative dynamics of theories with adjoint matter.

Joel Giedt
Rensselaer Polytech Inst

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