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Conformal Properties of the Self-Dual YM Theory

lundi 10 février 2020 14:00 (50 minutes)

I would like to promote the Self-Dual Yang Mills Theory as a possibly simplest non-linear conformal field theory in 4d with no supersymmetry. This field theory possesses UV divergences, but these do not spoil the conformal covariance: the effect of renormalization is that the coupling constant does not run, it is only a field renormalization which is needed. This results in a conformal invariance of the effective action under anomalous conformal transformations. I can give only a partial, but hopefully convincing proof of the latter. If the time permits I will also discuss the issue of conformal observables in this theory in relation with twistor geometry.

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