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**Prediction of  $\sin^2 \theta_W$  in a conformal approach to coupling unification.** (English) Zbl 1078.81586  
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Summary: The possibility that nonsupersymmetric conformal field theories softly broken below 100 TeV may provide an alternative to conventional grand unification is explored. We consider a low energy theory presumed to be of this type arising from the type IIB superstring compactified on a  $\text{AdS}_5 \times S_5/\Gamma$  space whose gauge group and the particle content are severely restricted by the compactification process. We present an example of a resulting  $\text{SU}(4)_C \times \text{SU}(2)_L \times \text{SU}(2)_R$  with three generations, which leads to coupling unification and a prediction for  $\sin^2 \theta_W \simeq 0.227$  and other phenomenology generally consistent with observations.

**MSC:**

[81V22](#) Unified quantum theories

**Full Text:** [DOI](#) [arXiv](#)

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