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Anomalous dimension in 2d nonlinear sigma models

Sigma models on semi-symmetric spaces provide the central building block for string theories on AdS backgrounds. Under certain conditions on the global supersymmetry group they can be made one-loop conformal by adding an appropriate fermionic Wess-Zumino term. We determine the full one-loop dilation operator of the theory. It involves an interesting new XXZ-like interaction term. Eigenvalues of our dilation operator, i.e. the one-loop anomalous dimensions, are computed for a few examples.