Commun. Math. Phys. 181, 91-129 (1996)



## Strings from N=2 Gauged Wess–Zumino–Witten Models

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Received: 13 November 1995/Accepted: 2 February 1996

**Abstract:** We present an algebraic approach to string theory. An embedding of sl(2|1) in a super Lie algebra together with a grading on the Lie algebra determines a nilpotent subalgebra of the super Lie algebra. Chirally gauging this subalgebra in the corresponding Wess-Zumino-Witten model, breaks the affine symmetry of the Wess-Zumino-Witten model to some extension of the N = 2 superconformal algebra. The extension is completely determined by the sl(2|1) embedding. The realization of the superconformal algebra is determined by the grading. For a particular choice of grading, one obtains in this way, after twisting, the BRST structure of a string theory. We classify all embeddings of sl(2|1) into Lie super algebras and give a detailed account of the branching of the adjoint representation. This provides an exhaustive classification and characterization of both all extended N = 2 superconformal algebras and all string theories which can be obtained in this way.

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