ID de Contribution: **146** Type: **Non spécifié**

Integrable sigma models with Z_N-symmetric homogeneous target spaces

The classical integrability of string sigma models is typically exploited for very symmetric backgrounds, Riemann symmetric spaces resp. semisymmetric superspaces (aka Z(2)- resp. Z(4)-symmetric homogeneous spaces). One way to potentially arrive at less symmetric, more generic backgrounds is to generalise to Z(N)-symmetric homogeneous target spaces for arbitrary N. Already many years ago two-dimensional sigma models in such spaces have been shown to be classically integrable when introducing WZ-terms in a particular way.

As an application, the relationship between Z(3)-symmetric homogeneous spaces and nearly (para-)Kähler geometries is discussed. In this talk results in the search for new models of this type, now allowing some kinetic terms to be absent analogously to the Green-Schwarz superstring σ-model on Z(4)-symmetric homogeneous spaces, are presented. For arbitrary N, a big class of integrable models exists that includes both the known pure spinor and Green-Schwarz superstring on Z(4)-symmetric cosets. Integrable Yang-Baxter deformations of this class of Z(N)-symmetric (super)coset sigma-models are introduced in same way as in the known Z(2)- or Z(4)-cases.

The Hamiltonian analysis reveals that these models are classically integrable and possess a classical r-matrix with twist function. Furthermore, when the parameters are chosen such that the model is integrable, some version of kappa symmetry exists, even in the purely bosonic case.

Type of contribution

Contributed Talk or Poster

Author: OSTEN, David (ITMP Moscow)

Orateur: OSTEN, David (ITMP Moscow)

Classification de Session: Posters

Classification de thématique: Posters