Yang-Baxter deformations of superstring sigma models

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The AdS5xS5 superstring is an integrable model with a prominent place in the AdS/CFT correspondence. I will discuss integrable deformations of this model, generated by r matrices solving the (in)homogeneous classical Yang-Baxter equation. One of the main questions surrounding these models is their string theory interpretation. The kappa symmetry of these models is known to imply a set of generalized supergravity equations which guarantee their scale but not necessarily Weyl invariance. In particular, unlike the parent AdS5xS5 string, inhomogeneous models do not appear to correspond to supergravity backgrounds. Based on relations between various inhomogeneous and homogeneous models under singular group transformations, I will show how a large number of homogeneous r matrices naturally divide in two sets with regards to supergravity, correlated with their algebraic structure: so-called jordanian r matrices do not correspond to supergravity, while abelian ones do. Time permitting I will elaborate on the possible inhomogeneous solutions, and their (in)equivalence.