

Real and pseudoreal forms of $D = 4$ Euclidean (super)algebras and classical r-matrices

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We consider $D = 4$ complex Euclidean algebra as well as $N = 1$ and $N = 2$ Euclidean superalgebras, and provide their real and pseudoreal forms for three signatures: $(4, 0)$ (Euclidean), $(3, 1)$ (Poincare) and $(2, 2)$ (Kleinian). Further we provide the classical r-matrices describing the triangular (twist) deformations of complex Euclidean (super)algebras and present their real and pseudoreal forms. Finally we comment on $N = 1$ and $N = 2$ SUSY extensions of kappa-deformed symmetry algebras, in particular the ones satisfying the supersymmetric classical Yang–Baxter equations.

The talk is based on common work with Andrzej Borowiec and Valerij N. Tolstoy, partly published in JHEP 1206 (2012) 154 (arXiv:1112.1936).