UNIFIED $(p,q;\alpha,\gamma,l)$-DEFORMATIONS OF OSCILLATOR AND HYBRID OSCILLATOR ALGEBRAS AND TWO-DIMENSIONAL CONFORMAL FIELD THEORY

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S u m m a r y

The unified multiparametric generalizations of the well-known two-parameter deformed oscillator and hybrid oscillator algebras are introduced. The basic versions of these deformations are obtained by imputing the new free parameters in the structure functions and by a generalization of defining relations of these algebras. The generalized Jordan–Schwinger and Holstein–Primakoff realizations of the $U_{pq}^{\alpha\gamma l}(su(2))$ algebra by the creations and annihilations operators of the basic versions of these deformations are found. The $(p,q;\alpha,\gamma,l)$-deformation of the two-dimensional conformal field theory is considered. The pole structure of the $(p,q;\alpha,\gamma,l)$-deformed operator product expansion (OPE) of the holomorphic component of the energy-momentum tensor with primary fields is found. The two-point correlation function of the $(p,q;\alpha,\gamma,l)$-deformed two-dimensional conformal field theory is calculated.