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q -deformed orthogonal and pseudo-orthogonal algebras and their representations. (English)

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Summary: Deformed orthogonal and pseudo-orthogonal Lie algebras are constructed which differ from deformations of Lie algebras in terms of Cartan subalgebra and root vectors and which make it possible to construct representations by operators acting according to Gel'fand-Tsetlin-type formulas. Unitary representations of the q -deformed algebras $U_q(\mathfrak{so}_{n,1})$ are found.

MSC:

- 17B37** Quantum groups (quantized enveloping algebras) and related deformations
- 17B10** Representations of Lie algebras and Lie superalgebras, algebraic theory (weights)
- 22E43** Structure and representation of the Lorentz group

Cited in **4** Reviews
Cited in **30** Documents

Keywords:

quantum group; q -analogue of Gel'fand-Tsetlin formulas; pseudo-orthogonal deformed algebras; deformed Lorentz algebras

Full Text: [DOI](#) [arXiv](#)

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