

# Jordan algebras and conformal models

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Jordan algebras were invented in a search of an axiomatic system for quantum mechanics.

They turn out to be extremely effective in describing conformal symmetries via the Tits-Kantor-Koecher construction assigning a light cone to each Euclidean Jordan algebra.

Using the Gunaydin oscillator realization we construct quantum mechanics systems with hidden conformal symmetry in various dimensions such as Hydrogen atom, Dyon-Dyon system, Landau problem.

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