

arXiv.org > hep-th > arXiv:1107.0643

High Energy Physics - Theory

Search or Article-id

All papers 🚽 Go!

(Help | Advanced search)

Download:

- PDF
- PostScript
- Other formats

Current browse context: hep-th

< prev | next >

new | recent | 1107

Change to browse by:

math math.QA

References & Citations

- INSPIRE HEP (refers to | cited by)
- NASA ADS

Bookmark(what is this?)

D. Chicherin, S. Derkachov, D. Karakhanyan, R. Kirschner (Submitted on 4 Jul 2011 (v1), last revised 7 Sep 2011 (this version, v2))

Baxter operators for arbitrary spin

This paper presents the second part of our study devoted to the construction of Baxter operators for the homogeneous closed XXX spin chain with the quantum space carrying infinite or finite-dimensional \$s\ell_2\$ representations. We consider the Baxter operators used in \cite {BLZ,Shortcut}, formulate their construction uniformly with the construction of our previous paper. The building blocks of all global chain operators are derived from the general Yang-Baxter operators and all operator relations are derived from general Yang-Baxter relations. This leads naturally to the comparison of both constructions and allows to connect closely the treatment of the cases of infinite-dimensional representation of generic spin and finitedimensional representations of integer or half-integer spin. We proof not only the relations between the operators but present also their explicit forms and expressions for their action on polynomials representing the quantum states.

Comments: 33 pages LaTex, version for publication Subjects: High Energy Physics - Theory (hep-th); Quantum Algebra (math.QA) Cite as: arXiv:1107.0643 [hep-th] (or arXiv:1107.0643v2 [hep-th] for this version)

Submission history

From: Roland Kirschner [view email] [v1] Mon, 4 Jul 2011 14:46:28 GMT (34kb) [v2] Wed, 7 Sep 2011 09:33:56 GMT (34kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.