

LIST OF CORRECTIONS

MADE FOR THE RUSSIAN EDITION OF THE BOOK
MCCME, MOSCOW, 2009 (IN PRESS)

- page xiv, line -9:
V. O. Tarasov (1985, 1986)
 \implies
V. O. Tarasov (1984, 1985)
- page xv, lines 10-12:
An essential ingredient here is the *fusion procedure* for the symmetric group due to Cherednik (1986), which we also discuss in detail.
 \implies
An essential ingredient here is the *fusion procedure* for the symmetric group going back to the work of Jucys (1966) and developed by Cherednik (1986), which we also discuss in detail.
- page xvi, line -10:
J. G. Nagel and M. Moshinsky (1964)
 \implies
J. G. Nagel and M. Moshinsky (1965)
- page xvii, line -13:
see also Brundan and Kleshchev (2007)
 \implies
see also Brundan and Kleshchev (2008)
- page xviii, line -12:
Alan Lascoux
 \implies
Alain Lascoux
- page 77, lines 1-5:
PROPOSITION 2.13.10. *For any $1 \leq M \leq N$ there exist expansions of the minors*

$$s_{1 \dots M}^{1 \dots M}(u) \quad \text{and} \quad \check{s}_{1 \dots k \dots M, l}^{1 \dots M}(u), \quad k, l \in \{1, \dots, M\}$$

in terms of the generator series $s_{ij}(u)$ of the algebra $X(\mathfrak{g}_N)$ which only involve the series with the indices satisfying $1 \leq i, j \leq M$.

\implies

PROPOSITION 2.13.10. *For any $1 \leq M \leq N$ in the algebra $X(\mathfrak{g}_N)$ there exist expansions of the minors*

$$s_{1 \dots M}^{1 \dots M}(u) \quad \text{and} \quad \check{s}_{1 \dots \hat{k} \dots M, l}^{1 \dots M}(u), \quad k, l \in \{1, \dots, M\}$$

in terms of the generator series $s_{ij}(u)$ which are independent of N .

- page 84, line 5:
summed over the indices $a_i, b_i \in \{-n, \dots, n\}$
 \implies
summed over the indices $a_i, b_i \in \{1, \dots, N\}$
- page 92 line -12:
quantum quality principle
 \implies
quantum duality principle
- page 122, line 14:
COROLLARY 3.4.6. *Every finite-dimensional ...*
 \implies
COROLLARY 3.4.6. *Up to twisting with an automorphism of the form (1.20), every finite-dimensional ...*
- page 129, lines 14-17:
Example 3 is contained in Billig, Futorny and Molev [35] and Brundan and Kleshchev [53]. Example 4 is taken from the paper [35], which also contains corresponding results for all Drinfeld Yangians.
 \implies
Example 3 is taken from Billig, Futorny and Molev [35] while Example 4 is contained in Brundan and Kleshchev [53] and the paper [35]. The latter paper also contains corresponding results for all Drinfeld Yangians.
- page 132, line 18:
quantum comatrix
 \implies
Sklyanin comatrix
- page 165, line -17:
However, this is possible only if the parameter γ takes half-integer values.
 \implies
However, this is possible only if the parameter γ takes integer or half-integer values.
- page 187, line -2:
The (5.9) implies
 \implies
The relation (5.9) implies

- page 192, line -16:
 were
 \implies
 where
- page 196, line 5: For these values we take the numbers
 \implies
 For these values we take the numbers negative to
- page 201 line -1, and page 388:
 replace the reference Jimbo [199] by
 [199] M. Jimbo, *Quantum R matrix related to the generalized Toda system: an algebraic approach*. Field theory, quantum gravity and strings (Meudon/Paris, 1984/1985), 335–361, Lecture Notes in Phys., 246, Springer, Berlin, 1986.
- page 234 line -10, twice:
 J_{UU}
 \implies
 $J_{UU}(0)$
- page 238, lines 4-5:
 Theorem 6.4.7 goes back to Cherednik [72, 73, 74]; see also Jucys [203].
 \implies
 Theorem 6.4.7 goes back to Jucys [203]. In the context of R -matrices the fusion procedure for the symmetric groups and Hecke algebras was developed by Cherednik [72, 73, 74].
- page 238, line 12:
 The fusion procedure for ...
 \implies
 The argument actually establishes its equivalence with a construction of Jucys [J-1971] which was rediscovered by Murphy [331] (see Proposition 6.4.1).
 The fusion procedure for ...
 ADDED REFERENCE:
 [J-1971] A. Jucys, *Factorization of Young projection operators for the symmetric group*, Lietuvos Fizikos Rinkinys **11**, 5–10 (1971).
- page 240, line -16:
 proposition
 \implies
 theorem
- page 255, line -18:
 to the center of
 \implies
 to the center

- page 258, line 9:
row tableau
 \implies
row diagram
- page 258, lines -8 (twice), -4, -3; page 259, lines 2; page 260, lines 3, 13
 Φ
 \implies
 ϕ
- page 295, lines 18, 19:
Its composition with the evaluation homomorphism (1.5) is a homomorphism $Y(\mathfrak{gl}_M) \rightarrow U(\mathfrak{gl}_{M+N})$
 \implies
Its composition with the evaluation homomorphism π_{M+N} given by (1.5), is a homomorphism $Y(\mathfrak{gl}_N) \rightarrow U(\mathfrak{gl}_{M+N})$
- page 295, lines 21–23:
By Lemma 1.11.2, the image of $t_{ij}^{(1)}$ under the homomorphism (8.31) is $E_{M+i, M+j}$. Therefore, Corollary 1.7.2 implies
 \implies
Corollary 1.7.2 implies
- page 296, line -8:
The action of \mathfrak{gl}_N on the basis vectors is given by Theorem 5.4.1,
 \implies
By Lemma 1.11.2, the image of $t_{ij}^{(1)}$ under the homomorphism (8.31) is $E_{M+i, M+j}$. Therefore, the action of \mathfrak{gl}_N on the basis vectors is given by Theorem 5.4.1 (applied to \mathfrak{gl}_{M+N}),
- page 312, lines 14–15:
the algebra of shifted symmetric functions in the variables $\lambda_{m+1}, \lambda_{m+2}, \dots$
 \implies
the algebra Λ^* , associated with the variables $\lambda_{m+1}, \lambda_{m+2}, \dots$
- page 319, line -8:
matrices for the algebra $U_q(\widehat{\mathfrak{gl}}_{M+N})$.
 \implies
matrices for the algebra $U_q(\mathfrak{gl}_{M+N})$.
- page 321, line -19 (add):
The generalized rings of symmetric functions Λ^a were introduced by Okounkov [O-1998].
ADDED REFERENCE:
[O-1998] A. Okounkov, *On Newton interpolation of symmetric functions: a characterization of interpolation Macdonald polynomials*. Adv. in Appl. Math. **20** (1998), no. 4, 395–428.

- page 325, line -18:
complementary module \mathfrak{p} .
 \implies
complementary module \mathfrak{p} and suppose that the corresponding weights ν_1, \dots, ν_n of the basis vectors are written in a non-decreasing order; that is, $\nu_i \prec \nu_j$ implies $i < j$.
- page 325, line -12:
form a basis of $Z(\mathfrak{g}, \mathfrak{k})$.
 \implies
form a basis of the left (or right) $R(\mathfrak{h})$ -module $Z(\mathfrak{g}, \mathfrak{k})$.
- page 326, line -7:
 $f_i \in U(\mathfrak{h})$
 \implies
 $f_i \in U(\mathfrak{h}_N)$
- page 336, line 7:
the Mickelsson–Zhelobenko algebra $Z(\mathfrak{g}_N, \mathfrak{g}_{N-2})$
 \implies
the Mickelsson–Zhelobenko algebra $Z(\mathfrak{g}_N, \mathfrak{g}_{N-2})$
- page 348, line -2:
polynomial in u
 \implies
polynomial $A(u)$ in u
- page 349, line -16:
highest vector ξ of $V(\mu)$
 \implies
highest vector ξ of $V(\lambda)$
- page 362, line 14:
corresponding basis vectors ξ_ν
 \implies
corresponding basis vectors ζ_ν
- page 370, line -8:
corresponding basis vectors ξ_ν
 \implies
corresponding basis vectors ζ_ν
- page 379, line -14 (add):
the construction of an analogue of the Gelfand–Tsetlin basis for representations of \mathfrak{sp}_{2n} announced in the paper by D. P. Zhelobenko (Russ. Math. Surv. 42 (1987), 247–248) is erroneous.