

Thesis Changes Log

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PhD Program: Mathematics and Mechanics

Title of Thesis: Quantum R-matrix identities and integrable systems

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The thesis document includes the following changes in answer to the external review process.

The Introduction is rewritten and extended. The explanation of the rational, trigonometric and elliptic dependence in the case of the integrable tops is added. All the notations used in the formulae in the Introduction (e.g. the definitions of the elliptic functions, the Poisson brackets between the dynamical variables in the defined systems, the notations for the potentials in the Hamilton functions for the introduced integrable systems) are specified in the Introduction without any links to the main text of the thesis.

The definitions and the properties of the elliptic functions collected in the appendices to each chapter have been replaced to a one appendix, the number of text intersections between different chapters have been lowered. The definition of the matrix basis used in the Baxter–Belavin quantum R-matrix has been also added to this Appendix.

The notations of the odd theta-functions are changed to be similar in the different chapters in the main text, all θ notations are replaced by ϑ . Also the structure constants κ and \varkappa have been renamed to the same notation \varkappa .

Also a lot of minor corrections in the main text (Chapters 2, 3 and 4) are made. Some typos and grammar mistakes are corrected. The missed part of the last sentence in the Conclusion is added, so the sense of this sentence is restored.