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Quantum groups graduate texts in mathematics vol 155

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Résumé de *Quantum groups graduate texts in mathematics vol 155*

This book provides an introduction to the theory of quantum groups with emphasis on the spectacular connections with knot theory and on Drinfeld's recent fundamental contributions. The first part presents in detail the quantum groups attached to SL2 as well as the basic concepts of the theory of Hopf algebras. Part Two focuses on Hopf algebras that produce solutions of the Yang-Baxter equation, and on Drinfeld's quantum double construction. In the following part we construct isotopy invariants of knots and links in the three-dimensional Euclidean space, using the language of tensor categories. The last part is an account of Drinfeld's elegant treatment of the monodromy of the Knizhnik-Zamolodchikov equations, culminating in the construction of Kontsevich's universal knot invariant.

Sommaire de *Quantum groups graduate texts in mathematics vol 155*

Preface, 0. Prerequisites, 1. Sets and Classes, 2. Measures and Outer Measures, 3. Extension of Measures, 4. Measurable Functions, 5. Integration, 6. General Set Functions, 7. Product Spaces, 8. Transformations and Functions, 9. Probability, 10. Locally Compact Spaces, 11. Haar Measure, 12. Measure and Topology in Groups, References, Bibliography, List of Frequently Used Symbols, Index.