THE JONES POLYNOMIAL AND QFT
- PART III -

FROM VACUUM-VACUUM EXPECTATIONS TO THE DUAL UNIVERSAL ENVELOPING ALGEBRA OF $\mathfrak{sl}_2$: THE YANG-BAXTER EQUATION

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      The third and last talk of the series is devoted to the study of the Yang-Baxter equation and the formalism related to the construction of the R-matrix. It is thought to be a first step in the direction of TQFT and contains all the basics algebraic and topological aspects of the theory. The binor calculus introduced by Roger Penrose is aso quickly investigated in order to move towards Hopf bialgebras and the dual universal enveloping algebra of $\mathfrak{sl}_2$.

For further developments of the theory, it's recommended to have a look at the book by Turaev listed below.

References

[KM] Kauffman, L.H., Knots and Physics, Third Edition, World Scientific Publishing Co.Pte.Ltd., 2001;

[VT] Turaev, V. G., Quantum Invariants of Knots and 3-Manifolds, 2nd Edition, De Gruyter, 2010.