THE JONES POLYNOMIAL AND QFT

- PART IV -

HOPF ALGEBRAS

QUANTUM GROUPS FROM A CATEGORICAL VIEWPOINT

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In this lecture we will have a closer look at the generalisation of universal enveloping algebras, namely Hopf algebras and their relation with the theory of quantum groups.

Though as a basic introduction, mostly self-contained, our goal is to understand the fundamental ideas that find application in TQFT.

As a suggestion,the interested reader may want to look at surgery theory, if interested in working in the field.

References

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[VT] Turaev, V. G., Quantum Invariants of Knots and 3-Manifolds, 2nd Edition, De Gruyter, 2010, Ch. 11;