

Recent progress on the volume conjecture for the Reshetikhin-Turaev invariants

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Abstract

In 2015, Qingtao Chen and I conjectured that at the root of unity $\exp(2\pi\sqrt{-1}/r)$ instead of the usually considered root $\exp(\pi\sqrt{-1}/r)$, the Reshetikhin-Turaev invariants of a hyperbolic 3-manifold grow exponentially with growth rate the complex volume of the manifold. In this talk, I will review some known results about this conjecture and present a possible approach of solving it including a recent joint work with Ka Ho Wong.