

All-Order Volume Conjecture for Closed 3-Manifolds from Complex Chern-Simons Theory

Tuesday, 18 July 2017 10:00 (1 hour)

Abstract: I'll review some general aspects of complex Chern-Simons theory on hyperbolic 3-manifolds, focusing on the case of gauge group $G=SL(2,C)$. After a brief introduction to the Volume Conjecture (VC), for knot complements and, a very recent mathematical proposal, for closed hyperbolic 3-manifolds, I'll show how complex Chern-Simons theory is related with them and how this connection leads to a novel generalization of the most recently proposed VC for closed 3-manifolds.

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