UNIVERSITY OF CALIFORNIA, SANTA BARBARA

GEOMETRY, TOPOLOGY, AND PHYSICS SEMINAR

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

Mauricio Romo
Institute for Advanced Study

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Room 6635 South Hall

Abstract: I'll review some general aspects of complex Chern-Simons theory on hyperbolic 3-manifolds, focusing on the case of gauge group G=$SL(2,\mathbb{C})$. 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.

This seminar is part of the NSF/UCSB 'Research Training Group' in Topology and Geometry. Information about future meetings can be found at http://www.math.ucsb.edu/~drm/GTPseminar/