BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

SYMMETRIC SPACES AND KNOT INVARIANTS FROM GAUGE THEORY

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Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:45pm in Room 144

Abstract: Given a link embedded in a three manifold, one can consider the representation varieties that are associated to the knot complement. The homology groups of these spaces give rise to link invariants. However, these invariants fall short for several reasons. For instance, they are not functorial with respect to the cobordisms of links and 3-manifolds. In this talk, we will discuss an approach to construct functorial approximations of these invariants using the guage theory techniques. This approach leads to a strategy to construct a functorial link invariant for each choice of a symmetric space. We will also explain an application of functoriality. As a by-product of our construction, we can produce polynomial invariants for a closed four-manifold equipped with an involution.

See `http://math.bu.edu/research/geom/seminar.html` or contact Si Li *sili@math.bu.edu* for more information.