## BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

## FACTORIZATION IN SUPER CHERN-SIMONS MATTER THEORIES ON $S^3$

Nathaniel Bade Department of Mathematics Northeastern University

February 17, 2016, 4:00 – 5:00pm Math/Computer Science, Room B19 111 Cummington Street, Boston

Tea: 3:45pm in Room 144

Abstract: For a compact Lie group G and a representation R, the partition function Z of N=2 super Chern-Simons theory gives new invariants for certain Riemannian three manifolds. For a family of squashed three spheres, Z can be calculated by integrals of quantum dilogarithm functions over the Cartan of G. In this talk, I will show how to evaluate such integrals and show that the partition function has interesting factorization properties conjectured to be related to a genus one Heegaard splitting of  $S^3$ .

See http://math.bu.edu/research/geom/seminar.html or contact Siu Cheong Lau lau@math.bu.edu for more information.