BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

POINCARÉ KOSZUL DUALITY AND FACTORIZATION HOMOLOGY

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Nov 13, 2013, 4:00 – 5:00pm
Math/Computer Science, Room 148
111 Cummington Street, Boston

Tea: 3:45pm in Room MCS 144

Abstract: Factorization homology is an invariant of an n-manifold M together with an n-disk algebra A. Should M be a circle, this recovers the Hochschild complex of A; should A be a commutative algebra, this recovers the homology of M with coefficients in A. In general, factorization homology retains more information about a manifold than its underlying homotopy type, and it can be interpreted as the global observables of a perturbative TQFT. In this talk we will lift Poincaré duality to factorization homology as it intertwines with Koszul duality for n-disk algebras – all terms will be explained. We will point out a number of consequences of this duality, which concern manifold invariants as well as algebra invariants. This is a report on joint work with John Francis.

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