Topology Seminar

Florian Naef

of MIT will be speaking on

String topology and the configuration space of two points

on March 2 at 4:30 in
MIT Room 2-131

Given a manifold M, Chas and Sullivan construct a Lie bialgebra structure on the homology of the space of *unparametrized* loops using intresections and self-intersections of loops. We give an algebraic description of this structure under Chen's isomorphism identifying loop space homology with cyclic homology. More precisely, we construct a homotopy involutive Lie bialgebra structure on cyclic cochains that depends on the partition function of a Chern-Simons type field theory. Moreover, we discuss the (non-)homotopy invariance of that structure and its relation to the configuration space of two points.