# MIT Topology Seminar

*Monday, November 21, 4:30pm*
*MIT Room 2-142*


## Kevin Costello
## (University of Chicago)


speaking on

# Constructing the Gromov-Witten potential associated to a topological conformal field theory


Abstract: This talk is about the relation between the moduli spaces of Riemann surfaces, Batalin-Vilkovisky algebras and linear symplectic geometry. I'll show how inside the uncompactified moduli spaces of Riemann surfaces one can find, in a canonical way up to homotopy, a chain playing the role of the fundamental class of the Deligne-Mumford spaces. This is not closed, but satisfies a certain BV master equation, for a BV algebra structure introduced by Sen and Zwiebach. This construction allows us to construct the analog of the Gromov-Witten potential associated to a TCFT. This is a state in a certain Fock space.



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