

Title: MTC[M3] and Twisted Hilbert Spaces

Abstract: The main goal of the second lecture will be to put the first one in a broader perspective. Both involve studying Q-cohomology of 3d N=2 theories on different 2-manifolds. While the first lecture could be naturally dubbed a "3d B-model," this second lecture will be about a "3d A-model" or, to be more precise, about a "categorification of the A-model" as we call it in a joint work with P.Putrov and C.Vafa. The first and, arguably, the simplest example of such 3d A-model is the equivariant Verlinde formula discussed by Du Pei in his lectures. Here, I will consider various generalizations focusing on twisted Hilbert spaces of 3d N=2 theories and their applications to 3-manifold invariants.