The Generalized Witten Conjecture and Moduli Spaces of Higher Spin Curves

Tyler Jarvis
Department of Mathematics
Brigham Young University

Abstract

I will describe the generalized Witten conjecture associated to KdV_r (the rth Gelfand-Dickey hierarchy), and discuss its proof (joint with Kimura and Vaintrob) in genus zero. I will also discuss some of the similarities between stable maps and quantum cohomology on the one hand, and higher spin curves on the other. Some of these similarities include analogs of the puncture and dilaton equations, and topological recursion relations.