Department of Mathematics, BGU

Algebraic Geometry and Number Theory

On *Wednesday, November ,22 2017*

At *15:10 – 16:30*

In *Math 101-*

Ran Tessler (ETH)

will talk about

Integrable hierarchies, wave functions and open intersection theories

Abstract: I will discuss the KdV integrable hierarchy, and its tau functions and wave functions.

Witten conjectured that the tau functions are the generating functions of intersection numbers over the moduli of curves (now Kontsevich's theorem). Recently the following was conjectured: The KdV wave function is a generating function of intersection numbers on moduli of "Riemann surfaces with boundary" (Pandharipande-Solomon-T,Solomon-T,Buryak).

I will describe the conjecture, its generalization to all genera (Solomon-Tessler), and sketch its proof (Pandharipande-Solomon-T in genus ,0 T,Buryak-T for the general case). If there will be time, I'll describe a conjectural generalization by Alexandrov-Buryak-T.