

Department of Mathematics, BGU

AGNT

On Wednesday, November ,13 2019

At 15:10 – 16:25

In 101-

Sara Tukachinsky (IAS)

will talk about

Enumerating pseudoholomorphic curves with boundary

Abstract: Open Gromov-Witten (OGW) invariants should count pseudoholomorphic maps from curves with boundary to a symplectic manifold, with Lagrangian boundary conditions and various constraints on boundary and interior marked points. The presence of boundary of real codimension 1 poses an obstacle to invariance. In a joint work with J. Solomon ,(2016-2017) we defined genus zero OGW invariants under cohomological conditions. The construction is rather abstract. Nonetheless, in a recent work, also joint with J. Solomon, we find that the generating function of OGW has many properties that enable explicit calculations. Most notably, it satisfies a system of PDE called open WDVV (Witten-Dijkgraaf-Verlinde-Verlinde) equation. For the projective space, this PDE generates recursion relations that allow the computation of all invariants. Furthermore, the open WDVV can be reinterpreted as an associativity of a suitable version of a quantum product.

No prior knowledge of any of the above notions will be assumed.

Please Note the Unusual Time!