1155-51-488 **Sara Tukachinsky***, School of Mathematics, IAS, 1 Einstein Drive, Princeton, NJ 08540.

Defining and calculating disk counting invariants via A_∞ algebras.

Genus zero open Gromov-Witten invariants should count pseudoholomorphic maps from the disk to a symplectic manifold, with boundary conditions in a totally real submanifold and with various constraints on boundary and interior marked points. The presence of boundary leads to bubbling phenomena that pose a fundamental obstacle to invariance. A Fukaya A_∞ algebra associated with the boundary condition L is a deformation of the dg algebra of smooth differential forms on L by pseudoholomorphic disks, with coefficient in a module over $\mathbb{R}$. This language turns out to be useful in open Gromov-Witten theory, as demonstrated in joint works with Jake Solomon. In particular, we develop a way of defining numeric invariants and show that they satisfy some general properties. For the projective space $\mathbb{C}P^n$ with $L = \mathbb{R}P^n$, these properties are sufficient to calculate all invariants explicitly. No prior knowledge of the subject matter will be assumed. (Received January 20, 2020)