This submission is for the invited session on Geometry organized by Miguel Abreu.

From categories to Gromov-Witten invariants

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I will describe a method of associating to a (dg or A-infinity) category a Frobenius manifold; which can be thought of as the Gromov-Witten invariants of the category. This construction is a non commutative version of Saito's theory of primitive forms for the unfolding of a singularity. When applied to the Fukaya category of a symplectic manifold, this construction recovers (under some conditions) the geometric Gromov-Witten invariants of the symplectic manifold. As a corollary we obtain (in this setting) Kontsevich's proposal that enumerative predictions of mirror symmetry can be deduced from the Homological Mirror Symmetry conjecture.