# Brane actions for operads of (stacky) curves

David Kern

Gromov–Witten invariants are K-theory classes used to construct a structure of algebra over the operad of genus-zero stable curves on the K-theory of a target scheme. In order to categorify this structure to one at the level of derived categories, one needs to use certain derived moduli stacks of stable maps, and Mann–Robalo show that a (homotopy coherent) operadic action can still be obtained thanks to the general phenomenon of brane actions, providing actions of operads on their spaces of extensions of identity, discovered by Toën.

In this talk, I will explain that for the Gromov–Witten invariants of a stack, the richer algebraic structure of the stacky curves in play now produces the cyclotomic decomposition of the inertia stack, known from the seminal work of Abramovich—Graber—Vistoli to already carry the decategorified structure.