

Tag. 2DI

Title. 2D Intersection Theory and its Homological Model.

Abstract. When you intersect half-dimensional cycles in 4 or higher dimensions, you get a count. In 2D, half-dimensional cycles can be replaced by paths and their intersections carry homotopical information. After inquiring why we should care, we ponder if this intersection theory has a graded model, and an expansion, much as the Taylor series is an expansion of smooth functions into the graded space of power series. The affirmative answer makes drunken port calls at barely-knotted "emergent" knots in 3D, at solidly-knotted knots in 4D, and at a theory of convolutions on finite dimensional Lie groups and algebras. God was having a good laugh when she threw all this at us without the user's manual.