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*$\mathbb{A}^1$-degrees of twisted Wronski maps*

In $\mathbb{A}^1$-enumerative geometry, the $\mathbb{A}^1$-degree of a finite map of varieties is given by counting points in a general fiber, weighted by, for each point, the class of its Jacobian determinant considered up to squares. This gives a sum in the Grothendieck-Witt ring of the base field, generalizing both the complex degree (absolute count of points in the fiber) and real topological degree (points weighted by the signs of their Jacobians) to arbitrary fields.

I will present some forthcoming work with Thomas Brazelton, in which we compute $\mathbb{A}^1$-degrees of Wronski maps with twisted real structures. Wronski maps arise in Schubert calculus and moduli of curves and have rich enumerative properties over both R and C; they measure ramification points of linear series on $\mathbb{P}^1$. By varying whether the ramification points are real or complex conjugate pairs, we vary the real structure of a Wronski-type family over $\overline{M_{0,n}}$. We describe how its $\mathbb{A}^1$-degree changes as the real structure is twisted.