

# Some remarks on transversality and symmetry

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Everyone knows that you can't have transversality and symmetry at the same time. One familiar example for symplectic topologists is the problem caused by multiple covers in defining holomorphic curve invariants, but the trouble arises in finite-dimensional settings as well. In this talk I will explain why, in a fairly wide variety of settings, the degree of transversality that is achievable without breaking symmetry is in fact much nicer and more useful than commonly known, and I will discuss what kinds of technical results must be proved in order to establish this in any given setting. Applications include transversality results for certain classes of multiply covered holomorphic curves, and a proof that simple holomorphic curves in Calabi-Yau 3-folds are generically super-rigid.