

8/ 7 [Ben Wormleighton] Walls for G-Hilb via Reid's recipe

Many crepant resolutions of Gorenstein quotient singularities can be realised as moduli of quiver representations, which depends on a stability condition. The space of stability conditions has a wall-and-chamber structure that captures much, and in some cases all, of the birational geometry of the singularity. We study this chamber decomposition for abelian subgroups of $SL(3)$ and give an explicit combinatorial / representation-theoretic description of the walls for the chamber corresponding to the G-Hilbert scheme. This description includes the geometry of each wall-crossing, and makes heavy use of Reid's recipe. We outline some work in progress using these results to compare the G-Hilbert scheme with another crepant resolution 'Hilb of Hilb' introduced by Ishii–Ito–Nolla de Celis.