

Birational rigidity of singular Fano hypersurfaces

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Abstract. We establish birational superrigidity for a large class of singular projective Fano hypersurfaces of index one. In the special case of isolated singularities, our result applies for instance to: (1) hypersurfaces with semi-homogeneous singularities of multiplicity asymptotically bounded by twice the square root of the dimension of the hypersurface, (2) hypersurfaces with isolated singularities whose Tyurina numbers satisfy a similar bound, and (3) hypersurfaces with isolated singularities whose dual variety is a hypersurface of degree sufficiently close to the expected degree.

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