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Deformation of a generically finite map to a hypersurface embedding and generalized Inoue type manifolds

I shall talk about joint work with Yongnam Lee.

The main theorem says that if we have a 1-parameter deformation to a hypersurface embedding, $W_t \mapsto Z_t$, and if W_0 has ample canonical bundle, then the image S_0 of W_0 is smooth, and Z_0 is an iterated univariate covering of W_0 , of normal type (this means that the line bundle where each univariate covering lies, is a power of the normal bundle of S_0).

The typical example that everybody knows is the deformation of canonical maps of hyperelliptic curves of genus 3 to canonical embeddings of plane quartic curves. A converse is also shown.

I shall later explain applications to the theory of Inoue type varieties X , introduced in previous joint work with Ingrid Bauer. These X are quotients W/G of a hypersurface W in a projective classifying space Z .