

Stable unfoldings of map-germs on singular varieties

Let $V \subset \mathbf{C}^n$ be open, let $X \subset V$ be an analytic variety, let $S \subset X$ be a finite set, and let $f : (X, S) \rightarrow (\mathbf{C}^p, 0)$ be a germ of analytic map.

I will sketch how to construct topologically stable unfoldings of such germs under very mild conditions, conditions so mild that the germs for which they *do not* hold form a subset of infinite codimension (in the sense pioneered by Tougeron).

There are several ingredients:

- (1) Critical sets for analytic maps on singular varieties via stratifications
- (2) Stratifications and fine resolutions (with due deference to Hironaka)
- (3) Jacobian ideal-sheaves in the contexts of (1) and (2).
- (4) Variations on the Thom-Mather theory that produces smooth equivalences out of commutative algebra.
- (5) Critical value stratifications (with due deference to Looijenga).

I will briefly describe these, and how they fit together to prove the result claimed.

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