

MULTIPLICITIES OF IDEALS OF FINITE CODIMENSION

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ABSTRACT. We study relations between non-degeneracy conditions for ideals of finite codimension in the ring of germs of holomorphic functions and isolated singularities of functions. In this new setting we apply earlier algorithms to study behavior of ideals under deformation with special view towards differences in behavior of general ideals and gradient ideals provided they are of finite codimension. In particular, we provide lower bounds for minimal change in number of solutions (without multiplicity) of certain systems of polynomial equations under generic deformation. This is joint work with M. J. Saia.