

Anne Pichon

Title: Lipschitz normal embedding of complex surface singularities

Abstract: A germ of a real or complex analytic space $(X, 0)$ is said to be Lipschitz normally embedded (LNE for short) if the identity map of $(X, 0)$ is a bilipschitz homeomorphism between the inner and the outer metric, that is if there exist a neighborhood U of 0 in X and a constant $K \geq 1$ such that $d_i(x, y) \leq K d_o(x, y)$ for all x and y in U . This property only depends on the analytic type of $(X, 0)$, and not on the choice of an embedding in some smooth ambient space $(\mathbb{R}^n, 0)$ or $(\mathbb{C}^n, 0)$. The study of Lipschitz Normal Embedded singularities is a very active research area with many recent results, for example by Birbrair, Bobadilla, Fernandes, Heinze, Kerner, Mendes, Misev, Neumann, Pedersen, Pereira, Pichon, Ruas, and Sampaio, but despite the current progress it is still in its infancy.

I will give a panorama on recent results on LNE of germs of normal complex surfaces. In particular, I will present results obtained recently in collaboration with André Belotto and Lorenzo Fantini for LNE surface germs.