

Parabolic manifolds of analytic diffeomorphisms along an invariant formal curve

jeudi 13 février 2025 14:00 (50 minutes)

Let $F : (\mathbb{C}^n, 0) \rightarrow (\mathbb{C}^n, 0)$ be a germ of a holomorphic diffeomorphism and let Γ be a formal curve at 0, invariant for F . Under certain sharp conditions on the restricted diffeomorphism $F|_{\Gamma}$, we show that there exists a finite non-empty family of complex submanifolds of $\mathbb{C}^n \setminus \{0\}$, invariant for F and entirely composed of orbits which converge to the origin and have flat contact with Γ (parabolic manifolds). In a second part of the talk, we adapt this result for the case of a germ of a real analytic diffeomorphism $F : (\mathbb{R}^n, 0) \rightarrow (\mathbb{R}^n, 0)$, where we can show, moreover, that each parabolic manifold of the family is foliated by real parabolic curves of F .

These results are obtained in collaboration with L. López-Hernández, J. Ribón, J. Raissy and L. Vivas.

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