

THE FINITE JET PARAMETRIZATION PROBLEM

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Abstract. Given a germ of a real-analytic hypersurface $(M, 0)$, the finite jet parametrization problem is to determine an inverse to the map

$$\text{Aut}(M, 0) \ni H \mapsto \left(\frac{\partial^{|\alpha|} H}{\partial Z^\alpha}(0) \right)_{|\alpha| \leq k},$$

for appropriate $k \in \mathbb{N}$. We survey the known results and discuss recent joint work with Nordine Mir providing a solution to this problem for hypersurfaces containing no complex varieties (and therefore, for boundaries of real-analytic domains) and give some applications of the parametrization.

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