DESINGULARIZING SPECIAL GENERIC MAPS

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Given a singular map $f : M^n \to \mathbf{R}^p$ of a closed manifold with $n \geq p$, we consider the following problem: for a standard projection $\pi : \mathbf{R}^m \to \mathbf{R}^p$ with $m > n$, does there exist an immersion or embedding $\eta : M^n \to \mathbf{R}^m$ such that $f = \pi \circ \eta$? Such a map η can be considered as a desingularization of f. In this talk, we consider special generic maps that have only definite fold as their singularities. For various dimension pairs (n, p), we give answers to the existence problem of immersion or embedding lifts into $\mathbf{R}^{n+1}$.

This is a joint work with Masamichi Takase (Seikei University, Japan).

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