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Section:

6. Topology

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Muranov, Yuri V., Vladimir State University, Russia

Surgery and splitting obstruction groups for one-sided submanifolds

Let $f : M \to Y$ be a (simple) homotopy equivalence of n-manifolds and $X \subset Y$ be a one-sided submanifold. The splitting obstruction groups $LS_{n-1}(F)$ are defined. If f is a normal map of degree 1, then the surgery obstruction groups for the manifold pair $LP_{n-1}(F)$ are defined. Here F is the square of fundamental groups. The relations between the LP_*-groups, the L_*-groups, and the splitting obstruction groups for the case of the epimorphism $\pi_1(X) \to \pi_1(Y)$ will be presented. Part of these results is joint work with D. Repovš.

Reference: Yu. V. Muranov, D. Repovš, D., Surgery and splitting obstruction groups for manifold pairs, *Mat. Sb.* **188** (1997), 127–142.