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„Families of diffeomorphisms and concordances detected by trivalent graphs“

Abstract:

This is joint work with Tadayuki Watanabe. We use earlier results by Watanabe to prove that the non-trivial elements in the rational homotopy groups of the diffeomorphism group (rel boundary) of a d -dimensional disk [detected by the Kontsevich characteristic classes valued in the algebra of trivalent graphs] can be lifted to the rational homotopy groups of the pseudo-isotopy space of the disk. Here d is at least 4. I will discuss mostly the case when d is even. We also prove that those elements can be lifted to the rational homotopy groups of the corresponding moduli spaces of psc-metrics.