

MIMS現象数理カフェセミナー

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Pochette surgery and its generalization

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Abstract : Iwase and Matsumoto defined pochette surgery as a cut-and-paste operation on 4-manifolds along a 4-manifold homotopy equivalent to the wedge sum of a circle and a 2-sphere. Pochette surgery can be interpreted as an operation involving a 2-knot and a cord. In this talk, we identify the diffeomorphism types of pochette surgeries on the 4-sphere by focusing on whether their 2-knots and cords are trivial or not. We also introduce a generalization of pochette surgery defined by Nakamura. Furthermore, we show that any finite representation group is isomorphic to the fundamental group of this generalized pochette surgery on a simply connected 4-manifold. This is joint work with Motoo Tange.



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