

Lifting Branched Covers to Braided Embeddings

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Abstract. An embedding of a manifold M^k in a trivial disc bundle over N^k is called braided if projection onto the first factor gives a branched cover. This notion generalizes closed braids in the solid torus, and gives an explicit way to construct many embeddings in higher dimensions.

One could ask which branched covers lift to braided embeddings. This question has been well studied for honest covering maps by Hansen and Petersen. In this talk, we will discuss about this question for branched covers over low (i.e. less than 5) dimensional spheres.