

1165-58-130

**Dave Auckly\***, Math Department, Kansas State University, Manhattan, KS 66506, and **Daniel Ruberman**. *Exotic Diffeomorphisms and Embeddings*.

In this talk, we will describe the construction of exotic homotopy classes in the Diffeomorphism group of some smooth 4-manifolds and corresponding classes in Embedding spaces. By an exotic homotopy class of diffeomorphisms we mean a class that contracts in the space of homeomorphisms. The collection of such classes forms a group, and we show that these groups can have arbitrarily large rank summands.

We will also describe a gauge theoretic invariant that detects these classes together with some notes on computations. (Received January 15, 2021)