

## **Stable diffeomorphism**

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Two  $2n$ -manifolds are stably diffeomorphic if they become diffeomorphic after connect summing with enough copies of  $S^n \times S^n$ . I will touch on two aspects of this equivalence relation: work with Kasprowski and Teichner classifying 4-manifolds up to stable diffeomorphism, and work with Conway, Crowley, and Sixt in which we instead fix a stable class, and investigate how many manifolds it contains, up to homotopy equivalence.