

# On the global stable manifold

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## Abstract

We give an alternative proof of the stable manifold theorem as an application of the (right and left) inverse mapping theorem on a space of sequences. We investigate the diffeomorphism class of the global stable manifold, a problem which in the general Banach setting gives rise to subtle questions about the possibility of extending germs of diffeomorphisms.

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\*joint work with A. Abbondandolo; arXiv:math.DS/0506292)