

## Abstract

### Leafwise Homotopy Equivalences and Leafwise Sobolov Spaces

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We prove that a leafwise homotopy equivalence between compact foliated manifolds induces a well defined bounded operator between all Sobolov spaces of leafwise (for the natural foliations of the graphs of the original foliations) differential forms with coefficients in a leafwise flat bundle. We further prove that the associated map on the leafwise reduced L2 cohomology is an isomorphism which only depends on the leafwise homotopy class of the homotopy equivalence.