

DIFFERENTIAL FORMS AND MAPPINGS WITH CONTROLLED DISTORTION

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We investigate necessary and sufficient conditions on approximately differentiable mappings $f : \mathbb{M} \rightarrow \mathbb{M}'$ of Riemannian manifolds to induce a bounded (with respect to Lebesgue spaces norms) operator of pull-back of differential forms. As a consequence, we obtain, in particular, that a homeomorphism $f : \mathbb{M} \rightarrow \mathbb{M}'$ of the class $\text{ACL}(\mathbb{M})$, for which the operator of pull-back of differential forms with the norm in \mathcal{L}_p is an isomorphism, is either quasiconformal or quasiisometric [1].

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REFERENCES

1. *Vodopyanov S. K.* "Spaces of differential forms and mappings with controlled distortion," Dokl. Akad. Nauk, Ross. Akad. Nauk, to appear (2008).