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Interpolation of compact non-linear operators on Banach triples. (English) Zbl 1119.46301
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Summary: We investigate the behavior of Lipschitz and compact non-linear operators under K and J real interpolation methods for Banach triples. We begin with the case when one of the triples reduces to a single Banach space, and we prove that the classical Lions-Peetre compactness theorems for linear operators still hold for Lipschitz and compact non-linear operators. We also establish a compactness result when the interpolation operator is considered from a J -space into a K -space.

MSC:

46B70 Interpolation between normed linear spaces

Keywords:

interpolation; compact non-linear operators