

On weak form of Peano 's theorem in the infinite-dimensional case

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Resumo/Abstract:

For a long time one was looking for an answer of Peano's theorem in infinite-dimensional Banach spaces. In 1974, Godunov proved that the Peano's theorem holds in a Banach space X if and only if X has finite dimension. In the following, turned all the attention to the weak form of Peano's theorem in the infinite-dimensional case. In 2003, Shkarin proved that if X is a Banach space containing a complemented subspace with an unconditional Schauder basis, then the weak form of Peano's theorem does not hold. In this work we try to show all details of the proof.

References

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