Falcó, Javier

A group invariant Bishop-Phelps theorem. (English) [Zbl 1465.46012]


In the spirit of the well-known Bishop-Phelps theorem, the main result of this interesting paper is to obtain the density of the set of norm attaining $G$-invariant functionals on a Banach space with a $G$-invariant norm in the set of all $G$-invariant functionals, where $G$ is a compact topological group acting on $X$. Also, the author proves that, if a Banach space with a $G$-invariant norm satisfies that every $G$-invariant functionals on it is norm attaining, then the subspace of all $G$-invariant elements is reflexive; this is in the spirit of the well-known James theorem. Finally, the author obtains a Bishop-Phelps-Bollobás result in this setting. The paper is carefully written.

Reviewer: Ginés López Pérez (Granada)

MSC:
46B04 Isometric theory of Banach spaces

Keywords:
Bishop-Phelps theorem; norm attaining map; group invariant functionals

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References:

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