

2016학년도 1학기

수학전공 Colloquium

제 목 Bishop-Phelps-Bollobas theorem for bilinear forms

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초 록

We study Bishop-Phelps Bollobás theorem for bilinear forms.

The very first version of Bishop-Phelps-Bollobás type result was for the linear functionals as follows.

(Bishop-Phelps-Bollobás theorem) Let X be a Banach space.

If and $x \in S_X$ and $x^* \in S_{X^*}$ satisfy $|x^*(x) - 1| < \varepsilon^2/4$, then there exist $y \in S_X$ and $y^* \in S_{X^*}$ such that $y^*(y) = 1$. $\|x^* - y^*\| < \varepsilon$ and $\|x - y\| < \varepsilon$.

We introduce some results and history. Specially, we show that this theorem holds for bilinear forms on $C(K) \times C(K)$ when the spaces are complex Banach spaces and K is compact Hausdorff space.

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