

Symmetrized strong Birkhoff–James orthogonality in C^* -algebras

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In this talk we present some results on mutual strong Birkhoff–James orthogonality in two classical C^* -algebras: the C^* -algebra $\mathbb{B}(H)$ of all bounded linear operators on a complex Hilbert space H and a commutative, possibly nonunital, C^* -algebra. With the help of the induced graph it is shown that this relation alone can characterize right invertible elements. Moreover, in the case of commutative unital C^* -algebras, it can detect the existence of a point with a countable local basis in the corresponding compact Hausdorff space.

This is a joint work with A. Guterman, B. Kuzma, R. Rajić and S. Zhilina.