

# ORTHOGONALITY AND REGULARITY PRESERVING MAPS

M.J. BURGOS,  
UNIVERSIDAD DE CÁDIZ.

ABSTRACT. In this talk we survey some recent results on orthogonality and regularity preserving maps from a unital  $C^*$ -algebra with non-zero socle. We show that every biorthogonality preserving surjective linear map from a unital  $C^*$ -algebra having essential socle is automatically bounded and a Jordan  $*$ -isomorphism multiplied by an invertible element. We apply the techniques on orthogonality preserving maps on  $C^*$ -algebras with large socle in order to determine the structure of strongly Moore-Penrose invertibility linear preservers.