

$C(K)$ -REPRESENTATIONS, BOOLEAN ALGEBRAS OF PROJECTIONS AND R-BOUNDEDNESS

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ABSTRACT. R-Bounded sets of bounded linear operators in Banach spaces play an increasingly important role in various branches of functional analysis, operator theory, harmonic analysis and partial differential equations. This notion was actually introduced in the mid-1990s by E. Berkson and T.A. Gillespie (R-property), but was already implicit in an earlier work of J. Bourgain (1983). In this talk we shall discuss the concept of R-boundedness and present some recent applications of this notion to Boolean algebras of projections in Banach spaces and to the representation theory of $C(K)$ -spaces on Banach spaces.