BANACH SPACES OF FUNCTIONS TAKING VALUES IN A C^*–ALGEBRA

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Abstract. Let $\mathscr{A}$ be a C^*-algebra with identity 1; and let $s(\mathscr{A})$ denote the set of all states on $\mathscr{A}$. The state space $s(\mathscr{A})$ (with the weak* topology) is used to construct classes of Banach spaces of functions defined on a fixed set S taking values in $\mathscr{A}$. The inter-relationship between spaces are considered. Special classes of operators on these spaces are also considered. When $\mathscr{A}$ is taken to be $\mathbb{C}$ and S to be $\mathbb{N}$, all spaces are just the classical spaces.

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