

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

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

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