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Extreme compact operators from Orlicz spaces to $C(\Omega)$

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Abstract: Let $E^{\varphi}(\mu)$ be the subspace of finite elements of an Orlicz space endowed with the Luxemburg norm. The main theorem says that a compact linear operator $T : E^{\varphi}(\mu) \to C(\Omega)$ is extreme if and only if $T^*\omega \in ExtB((E^{\varphi}(\mu))^*)$ on a dense subset of Ω, where Ω is a compact Hausdorff topological space and $\langle T^*\omega, x\rangle = (Tx)(\omega)$. This is done via the description of the extreme points of the space of continuous functions $C(\Omega, L^{\varphi}(\mu))$, $L^{\varphi}(\mu)$ being an Orlicz space equipped with the Orlicz norm (conjugate to the Luxemburg one). There is also given a theorem on closedness of the set of extreme points of the unit ball with respect to the Orlicz norm.

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