Apoorva Mate (Thursday, 2nd Novemeber at 4pm)

Title: Pełczyński's Property (V) on Positive Tensor Product on Banach Lattices

Abstract: A. Pełczyński introduced and studied a geometric property, now known as, Pełczyński's Property (V), for Banach spaces. All reflexive Banach spaces have Pełczyński's Property (V). The simplest non-reflexive Banach spaces with Pełczyński's Property (V) are c_0 & ℓ_∞. $C(K)$, the space of continuous functions on compact Hausdorff Space K has Pełczyński's Property (V). Since then, many examples of non-reflexive Banach spaces with Pełczyński's Property (V) have been provided. However, there are only a few examples of non-reflexive Banach lattices with Pełczyński's Property (V). For example, the spaces $C(K, E)$, where E is a separable Banach lattice with Pełczyński's Property (V) and $L_p(\mu, E)$, where $1 < p < \infty$ and E is order continuous non-reflexive Banach lattice with PPV are examples of non-reflexive Banach lattices with PPV. We assume E be an atomic reflexive Banach lattice and X be any Banach lattice with Pełczyński's property (V). We showed that the positive injective tensor product $E\check{\otimes}_{|\varepsilon|}X$ has Pełczyński's property (V) and the positive projective tensor product $E\hat{\otimes}_{|\pi|}X$ has Pełczyński's property (V) if and only if every positive linear operator from E to X^* is compact. As an application, we provide new examples of non-reflexive Banach lattices with Pełczyński's property (V).