

# STRONGLY WEAKLY COMPACTLY GENERATED BANACH SPACES AND THEIR RELATIVES

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In this talk, we survey the general properties of strongly weakly compactly generated Banach spaces, and present several results about the related classes of strongly Asplund generated and strongly conditionally weakly compactly generated spaces. We show that every strongly Asplund generated space is strongly conditionally weakly compactly generated, and that a Banach space is strongly weakly compactly generated if, and only if, it is weakly sequentially complete and strongly conditionally weakly compactly generated. We also prove that the notions of strongly Asplund generated and strongly weakly conditionally compactly generated space coincide for Banach lattices. Some applications in the setting of Lebesgue-Bochner spaces are also given.

The talk is based on a joint work with J. Rodriguez (Universidad de Murcia).