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Measures on suslinean spaces

Piotr Borodulin-Nadzieja

University of Wrocław, Poland pborod@math.uni.wroc.pl

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We say that a compact space is *suslinean* if it is ccc (which means that there is no uncountable family of pairwise disjoint open sets) but not separable. There is a rich literature studying the existence of such spaces satisfying additional properties. E.g. one of the formulations of the well-known Suslin hypothesis says that there is no linearly ordered suslinean space. Instead of considering ccc we study a stronger condition: supporting a strictly positive measure. So, we discuss the existence of nonseparable compact spaces supporting strictly positive measures with certain additional properties (e.g. spaces which cannot be mapped continuously onto $[0, 1]^{\omega_1}$).