19th Workshop: Noncommutative Probability, Noncommutative Harmonic Analysis and Related Topics with Applications, 31.07-6.08.2022, Bedlewo

ABSTRACT

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Failure of the Ryll-Nardzewski theorem on the CAR algebra

Abstract: Spreadability of a sequence of random variables is a distributional symmetry that is implemented by suitable actions of $\mathbb{J}_{\mathbb{Z}}$, the unital semigroup of strictly increasing maps on $\mathbb{Z}$ whose ranges are cofinite sets. In the first part of the talk I will report on some remarkable properties of $\mathbb{J}_{\mathbb{Z}}$ in terms of amenability. In particular, $\mathbb{J}_{\mathbb{Z}}$ has a right Følner sequence, although if fails to be right amenable. In the second part of the talk, I will show how the existence of a right Følner sequence can be used to prove that on the CAR algebra there exist spreadable states that nevertheless are not exchangeable.

The talk is based on joint work with Vitonofrio Crismale.