THEMATIC SESSION: Operator Algebras

Almost Elementary Dynamical Systems

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Motivated by recent work on dynamical analogues of the Toms-Winter conjecture, we propose an extension of Kerr's notion of almost finiteness for actions of discrete groups on compact metric spaces to actions on general C*-algebras by generalising the concept of castle. We call such actions almost elementary and study these dynamical systems in different frameworks. For instance, we show that they lead to $\mathcal{Z}$-stable crossed products, if these are simple, and that for actions of the trivial group our condition is a weak form of being tracially AF or having tracial nuclear dimension 0.