

Growth conditions for topological freeness

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Given a finitely generated group G , a non-trivial element $g \in G$, and a minimal action of G on a compact space X , with amenable neighbourhood stabilizers, we prove sufficient conditions in terms of various growth/decay functions for topological freeness of the action of g on X . We apply our results to the case of the (Furstenberg) boundary action of G , to conclude C^* -simplicity under (semi)rapid decay conditions. In this context, we also give a description of the support of stationary states on the reduced C^* -algebra of G . This is joint work with Nazmul Alam, Joseph Gondek, and Randy Pham.