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*Hyperfiniteness of graphs of slow intermediate growth*

A definable graph on a standard Borel space is hyperfinite if it is the increasing union of component-finite definable subgraphs. Hyperfiniteness is a strong form of amenability, and it is a long-standing open problem to determine whether every amenable graph is in fact hyperfinite. We are quite far from resolving the problem, which is most notably still open for Schreier graphs of solvable groups, although there is a positive answer for nilpotent and polycyclic groups. Another natural class where the problem is open is graphs of subexponential growth, that is, graphs for which there is a subexponential function  $f(n)$  such that every  $n$ -ball has at most  $f(n)$  vertices. Recently, it was shown by Bernshteyn and Yu that every graph of polynomial growth is hyperfinite. We extend this to show that there is a constant  $0 < c < 1$  such that every graph of growth  $\exp(n^c)$  is hyperfinite. This is joint with Jan Grebík, Andrew Marks and Václav Rozhoň.