

Operator Algebras

A functional analysis proof of Gromov's
polynomial growth theorem

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The celebrated theorem of Gromov in 1980 asserts that any finitely generated group with polynomial growth contains a nilpotent subgroup of finite index. Alternative proofs have been given by Kleiner (2007), etc. In this talk, I will give yet another proof of Gromov's theorem, along the lines of Shalom and Chifan–Sinclair, which is based on the analysis of reduced cohomology and Shalom's property HFD.