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Soren Galatius*, Stanford University, Department of Mathematics, Building 380, Stanford, CA 94305. *Stable homology of automorphism groups of free groups.*

The automorphism group $Aut(F_n)$ of a free group F_n on n letters has received much attention from many branches of mathematics. An important invariant associated to a group G is the homology $H_*(G)$ of the group. I will talk about recent advances in the understanding of $H_*(Aut(F_n))$, including a complete understanding of the direct limit as $n \rightarrow \infty$. The methods are mainly taken from homotopy theory. Graphs, i.e. one-dimensional complexes, are central to the argument. (Received June 07, 2007)