

Generalized Baumslag–Solitar groups: properties, results, problems

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A finitely generated group G acting on a tree with all vertex and edge stabilizers are infinite cyclic groups is called a *generalized Baumslag–Solitar group* (*GBS-group*). By the Bass–Serre Theorem, G is representable as $\pi_1(\mathbb{A})$, the fundamental group of a graph of groups \mathbb{A} whose vertex and edge groups are infinite cyclic.

To each GBS-group G , we can associate a labeled graph \mathbb{A} , a particular kind of a graph of groups. Such a labeled graph corresponds to an action of G on a tree and defines a presentation of G . Any *GBS* group can be obtained from infinite cyclic groups using free constructions: amalgamated free product and HNN-extension.

Our goal is to tell about some recent results on GBS groups: description of the centralizer dimension, the problem of universal equivalence, \mathcal{K} -residuality, connection with knot groups.

Some open problems will be discussed at the end of the talk.

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