

ALEXEY MURANOV

My research has been in combinatorial group theory and a little in model theory. Here are the arXiv numbers of some of my papers:

- [math/0504438] On torsion-free groups with finite regular file bases.
- [0807.1079] Interpretation of the Arithmetic in certain groups of piecewise affine permutations of an interval (joint with Tuna Altınel).
- [0909.2294] Finitely generated infinite simple groups of infinite square width and vanishing stable commutator length.

In particular, I have been interested in the small cancellation theory. I used it for example in [math/0504438] to construct a torsion-free group with 63 generators x_1, \dots, x_{63} such that every element of the group is uniquely written as $x_1^{n_1} \cdots x_{63}^{n_{63}}$, while every 42 elements out of x_1, \dots, x_{63} freely generate a free subgroup (in particular, the group is not polycyclic).

In [0909.2294], also using the small cancellation theory, I constructed a torsion-free infinite simple group generated by two elements, in which the *commutator length* is unbounded, but the *stable commutator length* is zero.

In [0807.1079], we showed that the first-order theory of any of the three Richard Thompson and Graham Higman's groups F , T , and V is *hereditarily undecidable*.