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**Dmytro M Savchuk\*** ([dmytro.savchuk@gmail.com](mailto:dmytro.savchuk@gmail.com)), Department of Mathematics, Texas A&M University, College Station, TX 77843, and **Yevgen V Muntyan** ([muntyan@math.tamu.edu](mailto:muntyan@math.tamu.edu)), Department of Mathematics, Texas A&M University, College Station, TX 77843. *GAP package AutomGrp for computations in groups and semigroups generated by automata and its applications.*

Every initial Mealy automaton defines a transformation of the set of all finite words over the alphabet it acts on. We study finitely generated groups and semigroups generated by such transformations.

After short introduction to these groups we explain why they are interesting from the computational point of view. Many algorithms related to these groups were implemented in AutomGrp package developed by the authors. We describe the functionality of the package, give some examples and provide several applications. (Received August 25, 2008)