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Roman Kossak* (rkossak@gc.cuny.edu). *Automorphism groups of nonstandard models of arithmetic.*

By a remarkable theorem of Jim Schmerl, there is nothing special about automorphism groups of models of Peano Arithmetic (PA); more precisely, if \mathcal{A} is a linearly ordered structure, then there is a model $M \models \text{PA}$ such that $\text{Aut}(M) \cong \text{Aut}(\mathcal{A})$. However, there is still much one can say about automorphism groups of certain classes of models of PA. Particularly interesting is the case of countable recursively saturated models. There are continuum many automorphism groups of such models, and each group is of power continuum. I will briefly survey the main results in the area, concentrating on group theoretic properties (like cofinality of a group, and existence of maximal automorphisms) which separate levels of saturation of nonstandard models. (Received March 29, 2010)