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On Algebraic Properties of Full Groups

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Abstract:
For any countable group G acting by homeomorphisms on the Cantor set X, we can associate a larger group $[[G]]$ consisting of homeomorphisms that locally coincide with elements of G. The group $[[G]]$ is dubbed *the full group of* (X, G). The full group as an abstract group is a complete invariant for continuous orbit equivalence of (X, G). Thus, $[[G]]$ possesses a great deal of information about the underlying dynamical system. These groups were recently used to construct the first examples of infinite simple finitely generated amenable groups [Juschenko-Monod]. In the talk we will give a survey of known algebraic properties of full groups, present a complete description of generators and defining relations for full groups associated with minimal $\mathbb{Z}$-subshifts, and give an elementary proof that these groups cannot be finitely presented. The talk is based on joint work with R. Grigorchuk.