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Christian Rosendal* (rosendal@math.uiuc.edu), Department of Mathematics, 273 Altgeld Hall, MC 382, 1409 West Green Street, Urbana, IL 61801. *Generic representations of countable groups on Fraïssé structures.*

For finitely generated groups Γ and ultrahomogeneous countable relational structures M we study the space $Rep(\Gamma, M)$ of all representations of Γ by automorphisms on M equipped with the topology it inherits seen as a closed subset of $Aut(M)^\Gamma$. When Γ is the free group F_n on n generators this space is just $Aut(M)^n$, but is in general significantly more complicated. We prove that when Γ is finitely generated abelian and M the random structure of a finite relational language or the random ultrametric space of a countable distance set there is a generic point in $Rep(\Gamma, M)$, i.e., there is a comeagre set of mutually conjugate representations of Γ on M . This is analogous to results of Hrushovski, Herwig, and Herwig–Lascar for the case $\Gamma = F_n$. (Received January 22, 2007)