

1047-51-91

**Johanna Mangahas\*** ([mangahas@umich.edu](mailto:mangahas@umich.edu)), 1320 W Stadium Blvd Apt 5, Ann Arbor, MI 48103. *Uniform uniform exponential growth of subgroups of the mapping class group.*

Let  $\text{Mod}(S)$  denote the mapping class group of a compact, orientable surface  $S$ . Finitely generated subgroups of  $\text{Mod}(S)$  which are not virtually abelian have uniform exponential growth with minimal growth rate bounded below by a constant depending only on  $S$ . For the proof, one finds in any such subgroup explicit free group generators which are "short" in any word metric. Besides bounding growth, this allows a bound on the return probability of simple random walks. (Received January 19, 2009)