

Meeting: 1004, Bowling Green, Kentucky, SS 14A, Special Session on Geometric Topology and Group Theory

1004-20-199 **Kai-Uwe Bux*** (bux_0154@kubux.net), Department of Mathematics, University of Virginia,
P.O. Box 400137, Kerchof Hall, Charlottesville, VA 22904-4137, and **Rodrigo Perez**. *On the
growth of iterated monodromy groups.*

It is conjectured that the iterated monodromy groups of quadratic polynomials with preperiodic critical orbit have intermediate growth. We illustrate some of the difficulties that arise in attacking this conjecture and prove subexponential growth for the iterated monodromy group of $z^2 + i$. To our knowledge, this is the first nontrivial example supporting the conjecture. (Received January 24, 2005)