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Margaret H. Dean* (mdean@bmcc.cuny.edu), mdean@bmcc.cuny.edu, and **Marianna C.**

Bonanome. *Dead-end elements and dead-end depth in groups.* Preliminary report.

The idea of a *dead-end* element in a group G was first introduced by O.V. Bogopolski in 1997. If G has a finite generating set X , an element g is a dead-end element if $|gx| \leq |g|$, for all $x \in X^\pm$. The *dead-end depth* of G is the minimal integer N such that given any group element g , there is a path in the Cayley graph for G leading from g to a point farther from the identity than g , whose length is no more than N . The dead-end depth of a group depends on the generating set X . We will give an introductory overview of dead-end elements and dead-end depth, and discuss some of the recent research pertaining to Thompson's group F and the Lamplighter Group, as well as other groups. (Received September 16, 2014)