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Louis Deaett* (louis.deaett@quinnipiac.edu) and **Alexander Hutman** (alexander.hutman@quinnipiac.edu). *Faster computation of zero forcing parameters*. Preliminary report.

Given a finite graph with some of its vertices “filled,” we can iteratively apply a simple rule: When a filled vertex has exactly one unfilled neighbor, that neighbor becomes filled. The *zero forcing number* of a graph is the size of a smallest set of vertices that, when initially filled, results in this process ending with all vertices filled. This number is (in a provable sense) hard to compute in general. We nevertheless discuss a strategy that allows its value to be computed more efficiently than via a brute-force search. In particular, we employ standard shortest-path algorithms in a sort of “metagraph” derived from the original. We also explore possible optimizations suggested by this strategy. (Received September 20, 2016)