Reachability Problems on Directed Graphs

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Abstract. I will present recent work and open problems on two directed graph reachability problems, one dynamic, one static. The dynamic problem is to detect the creation of a cycle in a directed graph as arcs are added. Much progress has been made recently on this problem, but intriguing questions remain. The static problem is to compute dominators and related information on a flowgraph. This problem has been solved, but the solution is complicated, and there are related problems that are not so well understood. The work to be discussed is by colleagues, other researchers, and the speaker.

* Research at Princeton University partially supported by NSF Grants CCF-0830676 and CCF-0832797. The information contained herein does not necessarily reflect the opinion or policy of the federal government and no official endorsement should be inferred.