

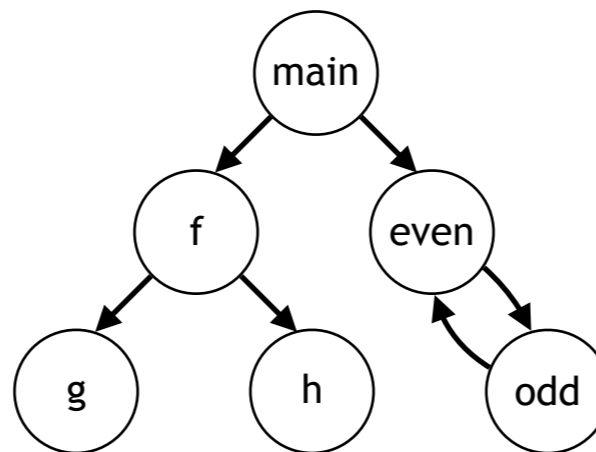
Call-Graph-Guided Verification



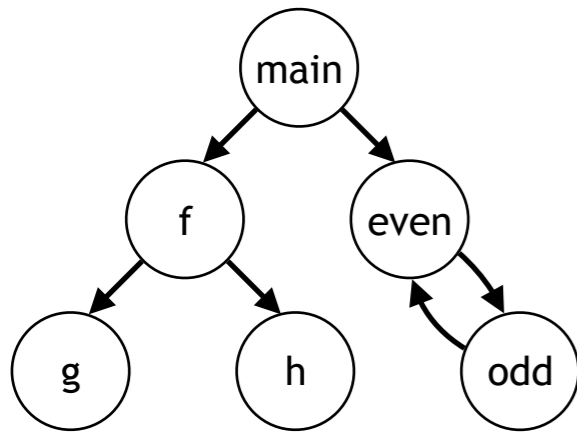
Lauren Pick
Princeton University

How do we verify **general interprocedural** programs in a **scalable** way?

Program call graph



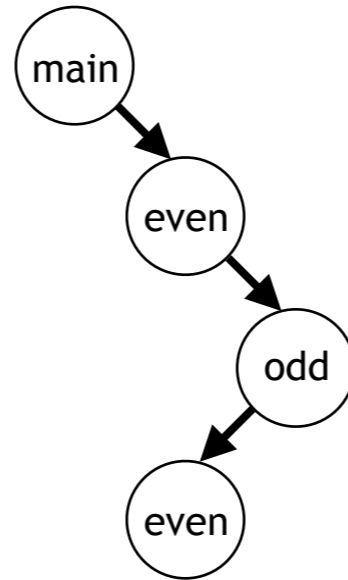
Program call graph



Choose finite call graph path



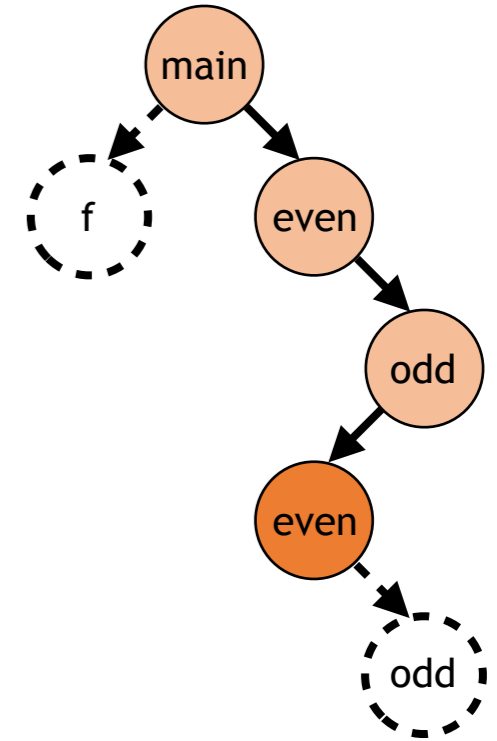
Finite call graph path



Try to learn summary for even

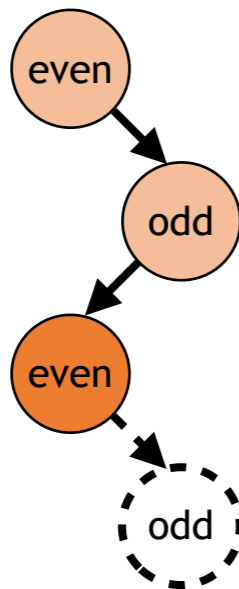
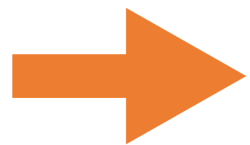


Environment + Target Procedure



Bounded Environment + Target Procedure

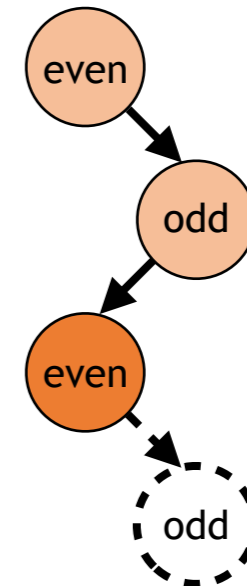
Bound environment for scalability



Prove even has property P

Assumptions + Bounded Environment + Target Procedure

Make assumptions for mutual recursion



Assume odd has property Q



Prove even has property P