

Dig Dog



Constant Mining and Bloodhound for Randoop

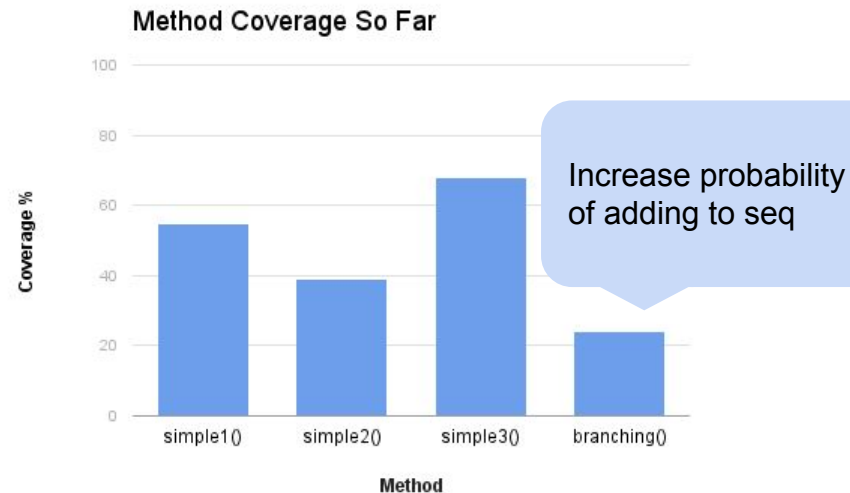
Alex Vrhel (avhrel) and Jakob Sunde (jsunde)

Constant Mining

- Motivation
 - Poor selection of initial values
- Approach
 - Examine source code
 - Add constants to pool
 - Weight by frequency
- Challenges
 - Weighting values properly
 - Stretch goal: Arrays or initialized objects

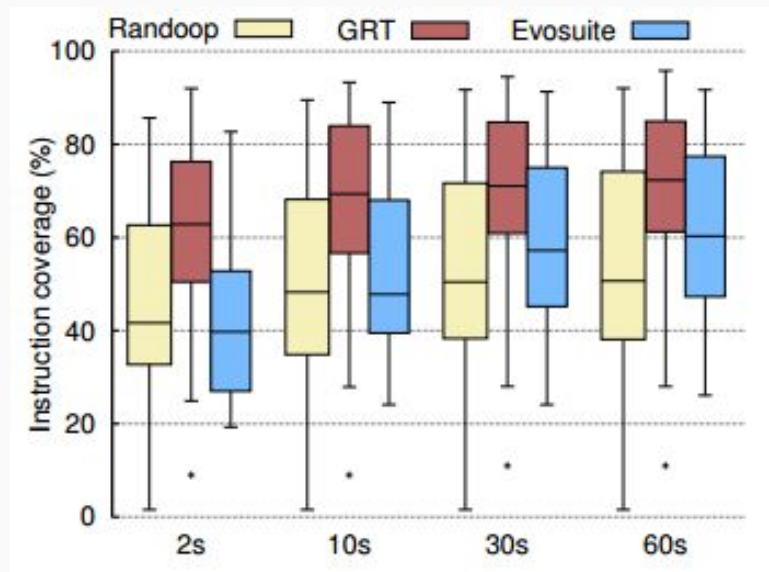
Bloodhound

- Motivation
 - Uniform selection -> poor coverage
- Approach
 - Dynamically estimate coverage
- Challenges
 - Tracking branch coverage
 - Alternative: track by method instead



Evaluation

- Run on defects4j
- Compare to Randoop, QuickCheck
- Coverage and fault detection



From <https://people.kth.se/~artho/papers/lei-ase2015.pdf>