

InterProcedure-II

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12:05 PM

Flow-insensitive. v.s. Flow-sensitive.

⇒ infeasible path. similar as the if.

if the return value of a procedure never be assigned
to an outer variable

⇒ Realizable Path.

⇒ ?? the over-approximated Adapt on graph.
is actually an infeasible walk.
it doesn't follow the actual execution order.
⇒ so it is longer but over-approximated.

label the call edge with call site "i" and open "C" C_i
return edge : "i" ")", i)

⇒ matched := $e \mid e \mid \text{matched} \mid (i \text{ matched } i)$

⇒ realizable := $e \mid C_i \text{ realizable} \mid \text{matched realizable}$

Application:

Improve the data flow analysis by restricting on realizable path

⇒ Program analysis as Context Free Language Reachability.

All-pairs L-path.

Single-Source L-path.

Single-Target L-path.

Single-Source - Single-Target L-path.

⇒ Can we reduce Adapt / longest walk into CFLR problem?

⇒ Encode Examples:

I: Interprocedural Finite Distributive Subset problem