

Mutation Panel

Mark Harman

(joint work with Mikis Papadakis, Yue Jia, Yves Le Traon and Xiangjuan Yao)





**Equivalent
Mutants**

Equivalent Mutants

M. Papadakis, Y. Jia, M. Harman, and Y. LeTraon

**Trivial compiler equivalence: A large scale empirical study of a simple fast and effective equivalent mutant detection technique.
ICSE 2015.**

Xiangjuan Yao, Mark Harman and Yue Jia.

**A Study of Equivalent and Stubborn Mutation Operators
using Human Analysis of Equivalence.
ICSE 2014.**

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Equivalent Mutants

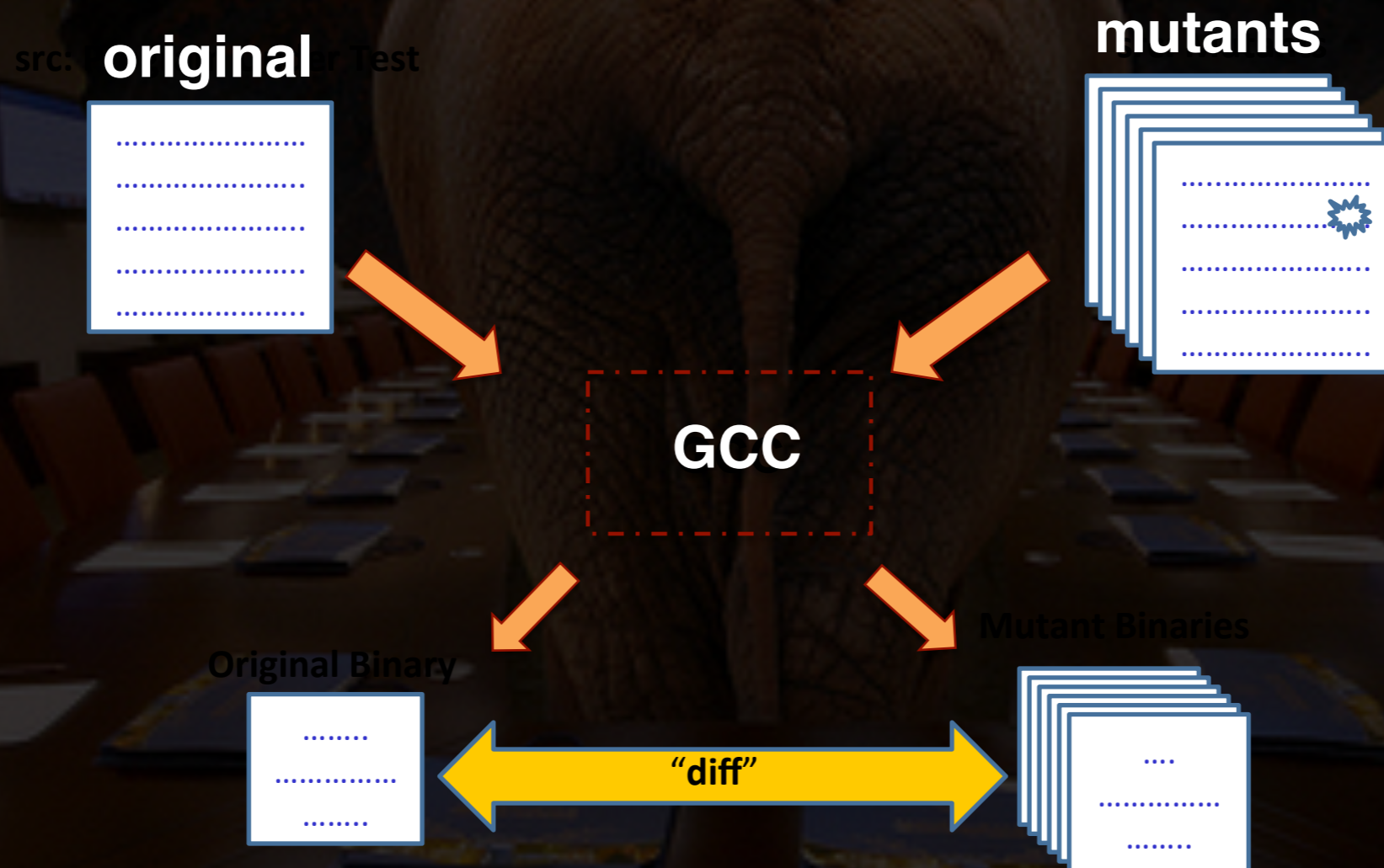
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Equivalent Mutants

Trivial Compiler Equivalence

Using GCC



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Equivalent Mutants

what percentage of equivalent mutants are TCE ?

30%

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