



Software Engineering Seminar

## **Program Slicing in Fault Localization**

## Description

In large software systems, keeping track of control and data flow is a very hard task. To this end, *program slicing* allows the developer to concentrate on the important parts of the program under consideration by essentially *hiding* other parts of the program from the developer that are not of importance for the problem at hand. That means: parts of a program that are not influenced by a chosen set of variables, or parts that do not, themselves, influence a specific variable or a set of variables are simply not shown to the user.

Various variants of program slicing (e.g. static, dynamic,  $\ldots$ ) were proposed so far. The aim of this topic is to review the current state of the literature on program slicing, as well as its usage, advantages and disadvantages in combination with fault localization.

## References

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- [3] A Edwin Robert. Program Slicing Techniques And Its Applications. 2(3):50-64, 2011.
- [4] Jifeng Xuan and Martin Monperrus. Test case purification for improving fault localization. CoRR, abs/1409.3176, 2014.

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