



Software Engineering Seminar

# Automated Mining of Patches

## Description

Automated program repair is a very hard task which has to generate patches to fix buggy program code. Coming up with these patches is not a trivial task and is often done by targeted random mutation of the buggy code or by using some kind of code templates that are applied to the buggy program. One idea is to utilize patches actually generated by humans, inferring the performed code transformations [1].

The student is to discuss the technique provided in the given paper and compare it to similar techniques in the field.

## References

- [1] Fan Long, Peter Amidon, and Martin Rinard. Automatic inference of code transforms for patch generation. In *Proceedings of the 2017 11th Joint Meeting on Foundations of Software Engineering, ESEC/FSE 2017, Paderborn, Germany, September 4-8, 2017*, pages 727–739, 2017.

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