



## Software Engineering Seminar

# Code Transplantation

## Description

Code Transplantation is the notion of taking functionality from a "donor" application and transfer (copy) it to a "recipient" application as, e.g., proposed in [1]. This may be useful when, for example, the donor application is not structured well enough (or at least not structured suitably for the given problem) and extracting the functionality manually would be tedious.

The student should discuss and evaluate the idea of code transplantation with regards to different applications related to debugging.

## References

- [1] Stelios Sidiroglou-Douskos, Eric Lahtinen, Anthony Eden, Fan Long, and Martin Rinard. CodeCarbonCopy. In *Proceedings of the 2017 11th Joint Meeting on Foundations of Software Engineering, ESEC/FSE 2017, Paderborn, Germany, September 4-8, 2017*, pages 95–105, 2017.
- [2] Stelios Sidiroglou-Douskos, Eric Lahtinen, Fan Long, and Martin Rinard. Automatic error elimination by horizontal code transfer across multiple applications. In *Proceedings of the 36th ACM SIGPLAN Conference on Programming Language Design and Implementation, PLDI '15*, pages 43–54, New York, NY, USA, 2015. ACM.

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