

# Search-based Composed Refactorings

Volker Stolz

Høgskolen i Bergen, Norway

`volker.stolz@hib.no`

Refactorings are commonly applied to source code to improve its structure and maintainability. Integrated development environments (IDEs) such as Eclipse or NetBeans offer refactoring support for various programming languages. Usually, the developer makes a particular selection in the source code, and chooses to apply one of the refactorings, which is then executed (with suitable pre-condition checks) by the IDE.

Here, we study how we can reuse two existing refactorings to implement a more complex refactoring, and use heuristics to derive suitable input arguments for the new refactoring. We show that our combination of the Extract Method and Move Method refactoring can automatically improve the code quality on a large Java code base. This gives us an experimental setup to validate the correctness of this refactoring in practice, which does not hold in general.

The talk is based on the paper:

Kristiansen, Stolz. Search-based composed refactorings, 2014.

<http://ojs.bibsys.no/index.php/NIK/article/view/14>.