

# Algorithm Engineering

Exercise No. 7

Monday 1<sup>st</sup> December, 2014

## Submission

- (1) Submit your solution with `$ git request-pull` (or similar) to [jkm@informatik.uni-jena.de](mailto:jkm@informatik.uni-jena.de). Report on your obtained improvements.

## 1 Improve your sorting algorithm

Based on your measurements and plots for your sorting algorithms improve your implementations. The following cases (and others depending on your obtained measurements) should be considered:

- Quicksort on sorted input
- Quicksort on reverse sorted input
- Quicksort on repeated elements
- Sorting small input

Other important aspects are reducing memory allocations. Compare also against the built-in sort routine. Follow the engineering cycle: design, implement, test, and measure. Report on your obtained improvements.