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Computational Geometry Exercise Set 11 HS08

URL: http://www.ti.inf.ethz.ch/ew/courses/CG08/

Exercise 1

Imagine we instead of doubling the slips of the unhappy house owners in the Swiss Algorithm, would multiply their number by some integer $t \in \mathbb{N}$. Does the analysis of the algorithm improve (i.e., does one get a better bound on the expected number of rounds, following the same approach)?

Exercise 2

We have shown that for $d = 2$ and sample size $r = 13$, the Swiss algorithm takes an expected number of $O(\log n)$ rounds. Compute the constants, i.e., find numbers c_1, c_2 such that the expected number of rounds is always bounded by $c_1 \log_2 n + c_2$. Try to make c_1 as small as possible.