

**ZMATH 2006e.03274**

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**How robust are average complexity measures? A statistical case study.**

InterStat, No. 7, 17 p. (2006).

Average case analysis forms an interesting and intriguing part of algorithm theory since it explains why some algorithms with bad worst-case complexity can be better on the average. Famous examples are the quicksort, simplex method and the wide variety of computer graphics and computational geometry algorithms. Here we make a statistical case study on the robustness of average complexity measures, which are derived assuming uniform distribution, for non-uniform inputs (both discrete and continuous). (Author's abstract)

*Classification:* K95 K75

*Keywords:* algorithms; robustness; average case complexity; worst-case complexity; replacement sort