Table 1: Task completion times for each task. Gray cells contain values computed by us.

Approach	sor	smm	fft	mean
FLEXJAVA	2.8	1.95	3	2.583
EnerJ	14.9	18.44	19.94	17.76
t/W	-9.883	0	0	-8.908
df	9	–	–	9
p	<0.001	0.002	0.006	<0.001

Same Results: FLEXJAVA: Language Support for Safe and Modular Approximate Programming

Summary: The authors develop FLEXJAVA, an approach to support approximate programming for the Java programming language. They compare it to EnerJ as baseline [].

- Independent variable: Tool support (2 levels, operationalized with, FLEXJAVA and EnerJ)
- Tasks: 3 different benchmarks, each with two versions in different orders
- Dependent variables: Task completion time [metric scale]
- Null hypotheses:
  Not explicitly stated, but to compare the time to annotate source code with each of the two tools
- Results:
  1. Authors state that there is a significant difference, yet did not report on a significance test

Our reanalysis consisted of two steps. First, we conducted the significance tests. To this end, we first checked for normality and then applied the appropriate test (t test for dependent samples or Wilcoxon). In Table 1, we summarize the results of our reanalysis.

For this study, it does not make a difference whether we aggregate the data or not; the difference is significant on the task level as well as over all tasks. Thus, we have provided evidence for the authors' statement of a significant difference. To reanalyze the data, we have extracted the numbers from Figure 9 of the paper, as we could not access the exact numbers. Although the authors provide a replication package, which is approved by the Replication Packages Evaluation Committee of FSE 2015, we could not find the results of the study in the repository.