Instructions for PDSW-DISCS Reproducibility Studies

We call for reproducibility studies that for the first time reproduce experiments from papers previously published in PDSW-DISCS or in other peer-reviewed conferences with similar topics of interest. Reproducibility study submissions are selected by the same peer-reviewed competitive process to which regular papers are subjected. In addition, these submissions undergo validation of the reproduced experiment and must include reproducibility information that can be evaluated by a publicly available automation service.

(The following has been adapted from the ISSTA'18 CFP.) A reproducibility study must go beyond simply re-implementing an algorithm and/or re-running the artifacts provided by the original paper. It should at the very least apply the approach to new, significantly broadened inputs. A reproducibility study should clearly report on results that the authors were able to reproduce as well as on aspects of the work that were irreproducible. In the latter case, authors are encouraged to make an effort to communicate or collaborate with the original paper's authors to determine the cause for any observed discrepancies and, if possible, address them (e.g., through minor implementation changes).

In particular, reproducibility studies should follow the ACM guidelines on reproducibility (different team, different experimental setup) with respect to the experiment under study: "The measurement can be obtained with stated precision by a different team, a different measuring system, in a different location on multiple trials. For computational experiments, this means that an independent group can obtain the same result using artifacts which they develop completely independently." [ACM Artifact Review and Badging Policy]

This means that it is also insufficient to focus on repeatability (i.e., same experiment) alone. Reproducibility Studies will be evaluated according to the following standards:

- Depth and breadth of experiments
- Clarity of writing
- Appropriateness of Conclusions
- Amount of useful, actionable insights
- Availability of artifacts that pass the automated testing procedure

In particular, we require reproducibility studies to pass our automated testing procedure (see here). Accepted papers will earn the prestigious ACM badge *Results Replicated* and, if the work under study was successfully reproduced, the associated paper will earn the prestigious ACM badge *Results Reproduced*. (End of adaptation from the ISSTA'18 CFP.)