April 30th, 2020

Dear Editor of The R Journal:

Please find enclosed a manuscript, entitled "*FarmTest: An R Package for Factor-Adjusted Robust Multiple Testing*", which we are delighted to submit for exclusive consideration of publication in The R Journal.

In this paper, we introduce an R package, named "FarmTest", which implements some new robust multiple testing methods developed in Fan et al. (2019) [*J. Amer. Statist. Assoc.* **114** (2019) 1880—1893] and Zhou et al. (2018) [*Ann. Statist.* **46** (2018) 1904—1931]. Specifically, the main function implements factor-adjusted robust multiple testing methods for testing many mean effects. Behind this procedure, a multi-factor model is used to characterize the dependency among features. Three types of factors are considered: observable, latent, and a mixture of observable and latent. Due to heavy-tailed distribution, robust methods are applied to estimate model parameters as well as to construct test statistics. Therefore, this package also contains functions for robust estimation of mean/mean vector, covariance matrix and data-driven Huber regression.

Thank you very much for your consideration. We hope that this paper will be of interest to you, and to the audience of The R Journal.

Sincerely,

Koushiki Bose, Jianqing Fan, Yuan Ke, Xiaoou Pan and Wenxin Zhou