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Brice Merlin Nguelifack* (nguelifa@usna.edu), 572 Holloway Rd., Ste 300, Stop C, United States Naval Academy, Annapolis, MD 21403. *Generalized signed-rank estimation for regression models with non-ignorable missing responses.*

In this paper, we study the generalized signed-rank estimator of the regression coefficients with non-ignorable missing responses. The generalized signed-rank objective function covers a large class of existing objective functions such as the signed-rank, the least absolute deviation among others. We establish the consistency and the limiting distribution of the proposed estimator of the underlying parameter in the regression model. Finite-samples simulation studies are carried out to evaluate the performance of the proposed estimation method, and a practical application is also given to illustrate our method. Results of these studies show that the proposed approach results in a robust and more efficient estimator compared with the least squares and least absolute deviation approaches, mainly when dealing with heavy-tailed, contaminated model error distributions and/or when data contain gross outliers in the response space. (Received August 28, 2017)