1116-VP-1180   **Brice Merlin Nguelifack*** (`bmn0003@auburn.edu`), 610 Americana Dr. Apt 104, Annapolis, MD 21403, and **Guy-Vanie Miakonkana**. *Rank Based Group Variable Selection.*

A robust rank based estimator for variable selection in linear models, with grouped predic- tors, is studied. The proposed estimation procedure extends the existing rank based variable selection (Johnson and Peng (2008)) and the ww-scad (Wang and Li (2009)) to linear regres- sion models with grouped variables. The resulting estimator is robust to contamination or deviations in both the response and the design space.The Oracle property and asymptotic normality of the estimator are established under some regularity conditions. Simulation stud- ies reveals that the proposed method performs better than the existing rank based methods (Johnson and Peng (2008), and Wang and Li (2009)) for grouped variables models. This estimation procedure also outperforms the adaptive Hlasso (Zhou and Zhu (2010)) in the presence of local contamination in the design space or for heavy tailed error distribution. (Received September 17, 2015)