1145-VT-2253 **Hasthika s Rupasinghe Arachchige Don*** (`hasthika@appstate.edu`), 121 Bodenhiemer Dr., Department of Mathematical Sciences, Appalachian State University, Boone, NC 20608, and **Lasanthi C Pelawa Watagoda**. *A new regularization and variable selection technique - HRLR.* Preliminary report.

This work propose a new variable selection and parameter estimation method for the multiple linear regression model $Y = \beta_1 x_1 + \cdots + \beta_p x_p + e$. This new method is a hybrid of ridge regression and relaxed lasso regularization. Theoretical and simulated results demonstrate that the new method produces sparser models with equal or lower prediction loss than the regular Lasso and Relaxed Lasso estimators for high dimensional data. (Received September 25, 2018)