This paper describes the idea of using the bootstrap technique to estimate standard errors in regression models. The basic idea is: given a regression model, generate subsets of data from the model; for each bootstrapped dataset, the parameters can be estimated using the ordinary least square formula; then the distribution of the errors can be approximated using the estimated parameters.

The authors use theoretical analysis and examples to demonstrate that the conventional asymptotic formulas are excessively optimistic in estimating standard errors. The main assumptions include that the model is correct and the disturbances are i.i.d. The authors admit the weakness that the estimation of the bootstrap method tends to be smaller and biased downward.