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A heuristic approach to combat multicollinearity in least trimmed squares regression analysis

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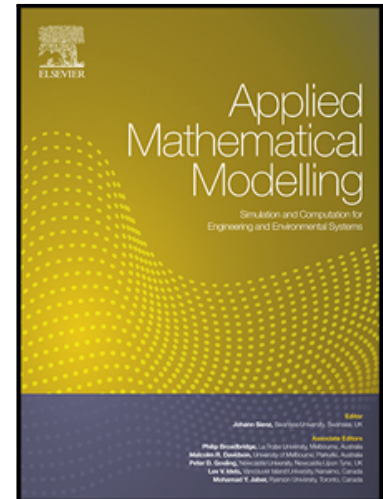
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Highlights

- A heuristic approach is suggested to decrease the effects of the outliers and multicollinearity in the regression models.
- Based on a penalization scheme, a nonlinear integer programming problem is proposed to be used as a regression model.
- The advantages of our method (MLTSCM) are: the data are not distorted and there is no need to choose the biasing parameter.
- Numerical experiments confirm that the proposed methods are quite efficient in contrast to the classical one.
- The proposed estimators have significant value of goodness of fit in numerical point of view.

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