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1433, Ås
NORWAY

March 19, 2019

Romà Tauler,
Editor in Chief
Chemometrics and Intelligent Laboratory Systems

Dear Mr. Tauler,

I am pleased to submit an original research article entitled “**Comparison of Multi-response Prediction Methods**” on behalf of the authors. This manuscript has made an extensive comparison of different multivariate multi-response prediction methods including Principal Component Regression, Partial Least Squares Regression and Envelopes. The data are simulated based on a factorial design of various properties of data that includes the predictor components relevant to the response and levels of multicollinearity in the predictors. The manuscript also demonstrates an application of the tool *simrel*¹ which we have discussed in the previous paper published in Chemometrics and Intelligent Laboratory System.

Many multivariate regression methods have been developed but only a few of them have leveraged the covariance structure of response variables for prediction. Here we have compared well-established methods such as Principal Components Regression and Partial Least Square Regression with methods based on Envelopes which is relatively new and claimed to have better performance. The comparison is made using both simulated and real data from the field of chemometrics.

This manuscript not only gives an overview of the performance of these prediction methods but also encourages researchers to explore, use and implement newly developed methods based on the properties of their data. We believe that this manuscript is appropriate for publication in *Research Paper* section in Chemometrics and Intelligent Laboratory System.

This manuscript has not been published and is not under consideration for publication elsewhere. We have no conflict of interest to disclose.

Thank you for your consideration.

Sincerely,



Raju Rimal

¹R. Rimal, T. Almøy and S. Sæbø. “A tool for simulating multi-response linear model data”. In: *Chemometrics and Intelligent Laboratory Systems* 176 (May. 2018), pp. 1-10. ISSN:3239. DOI: 10.1016/j.chemolab.2018.02.009.