

Haben Michael
Department of Mathematics & Statistics
University of Massachusetts
710 N. Pleasant St.
Amherst, MA 01003

February 22, 2023

Editorial Board, *Journal of Multivariate Analysis*

Dear Editors,

Please find enclosed a copy of our manuscript, “The Population and Personalized AUCs,” which Professor Tian and I submit for consideration for publication in the *Journal of Multivariate Analysis*. This manuscript was recently rejected as too long (Manuscript No. JMVA-D-23-00061) and we have shortened it considerably, now standing at 22 pages total (15 pages + proofs). (The decision letter also mentioned to “motivate that although your work is about bivariate variables it should be considered to be multivariate,” which we take to be general advice that all submissions to this journal should meet, since nothing in this manuscript discusses bivariate data.)

The manuscript describes ways of extending the area under the curve to accommodate clustered, possibly paired data. The need for such an extension arises frequently, including in the authors’ previous work with medical professionals, yet to our knowledge statistical models and parameters have not been carefully described. We describe two population parameters that may produce substantially different inferences and conclusions. A careful consideration of the assumptions and goals of analyzing clustered data is therefore necessary, rather than the more ad hoc procedures currently in employ.

We have not submitted the manuscript elsewhere, and look forward to your review and comments.

Sincerely,

Haben Michael