

December 20, 2017

Dr. C. Genest
Editor-in-Chief
Journal of Multivariate Analysis

Dear Dr. Genest,

Please find enclosed a copy of manuscript titled “A semiparametric stochastic mixed model for bivariate longitudinal data” that Dr. Joel A. Dubin and myself would like to submit for consideration of publication in Journal of Multivariate Analysis.

In this manuscript, we propose a novel bivariate longitudinal model which assumes parametric covariate effects and nonparametric time courses and models within-subject and between-response correlation using a bivariate Gaussian field and random effects, respectively; and provides estimation procedures for all relevant model parameters and variance components. The relationship across the bivariate responses is modelled by a bivariate Gaussian field and a joint distribution of random effects. We believe this is an exciting new approach that could be of use in various applications in which bivariate longitudinal data arises.

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

Sincerely yours,

Kexin Ji
Department of Statistics and
Actuarial Science
University of Waterloo
Waterloo, Ontario, Canada
N2L 3G1