

PIPGES · WEBINARS

APR · 01
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(GMT-03:00) Brasilia Standard Time - Sao Paulo

The video call link will be available at:

<https://tiny.one/osorio-f>

Interinstitutional Graduate Program in Statistics (PIPGES) of Federal University of São Carlos with University of São Paulo promotes seminars groups (temporarily webinars, due to pandemic issues) of researches involving Probability, Statistics, Machine Learning etc. Our interest, among other things, is to stimulate the sharing of knowledge, as well as the connection between members of the program and researchers in other institutions.

Organizer

Michel H. Montoril, Department of Statistics,
Federal University of São Carlos.

UFSCar

A ROBUST ESTIMATE OF THE PROBABILITY OF AGREEMENT BETWEEN TWO MEASUREMENT SYSTEMS USING P-SPLINES

Assessing agreement between two measurement instruments which varies in pricing, fastness and other features, has been of growing interest in several areas of knowledge. Some methods assume that the differences of the paired measurements come from a normal distribution. In this work, we develop the probability of agreement to compare measurement systems using a semiparametric approach. Because the assumption of normality of these differences, is unrealistic in many situations, we focus on the use of penalized splines considering the scale mixture of normal distributions to model non-normal measurements. Based on asymptotic theory for penalized maximum likelihood estimators a method for constructing a confidence band for the probability of agreement is provided. This class of models is flexible and allows to model datasets with high levels of kurtosis, and potential outliers.

SPEAKER

Felipe Osorio · Universidad Técnica Federico Santa María

BIO

Felipe Osorio received the degree in statistical engineering from the Universidad de Valparaíso, Chile, in 2001, and the D.Sc. degree in statistics from the Universidade de São Paulo, Brazil, in 2006. He is currently an Assistant Professor with the Department of Mathematics, UTFSM, Chile. He is the coauthor of the book *Spatial Relationships Between Two Georeferenced Variables With Applications in R* (Springer, in 2020). His research interests include models for data with longitudinal structure (mixed-effects models, GEE) and diagnostic methods and the computational implementation of such techniques. He is the creator and the maintainer of several packages for the R statistical environment.

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