

PROBABILITY SEMINAR

Title: Similarity Tests by Empirical Quantile Functions and Mallows Distance

Speaker: Marta Lizeth Calvache

Affiliation: Universidade de Brasilia

Date: 11-05-2018

Time: 2:15pm

Place: Room MAT-A(Miniauditorium)

Abstract: Tests of fit using Mallows distance introduced in del Barrio et al (1999-2000), provide a powerful method for assesing fit of empirical data to a location-scale family of distributions.

We will present similarity tests for location-scale families based on Mallows distance of order 2 between the empirical quantile distribution and the root distribution. Also, we will present weighted similarity tests for stable location-scale families.

References

- [1] Del Barrio, E., Custa-Albertos, J.A., Matran C. and Rodríguez-Rodríguez, J.M.(1999). *Tests of goodness of fit based on the L_2 -Wassertein distance*,- Annals of estatistics, vol 27,1230-1239.
- [2] Del Barrio, E., Giné E. and Utzet F.(2005). *Asymptotics for L_2 functionals of the empirical quantile process, with aplications to tests based on weighted Wassertein distances*,- Bernoulli, vol 11,131-189.
- [3] Dorea, C.C.Y. and Lopes, L.P.(2014) *Weighted Similarity Tests for Location-scale families of Stable Distributions*. Acta Mathematica Hungarica, vol 134(1-2),1-11.
- [4] Mendes, W.S. (2015) *Convergência em distância Mallows ponderada com aplicações em Somas Parciais e Processos Empíricos* Tese de Doutorado, Universidade de Brasília.