



SEMINARIO DE ESTATÍSTICA
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17:00-18:00

Quantiles, expectiles and extremiles: a new perspective on asymmetric least squares

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Summary: Quantiles and expectiles of a distribution are useful descriptors of its tail in the same way as the median and mean are related to its central behavior. In this talk we introduce a valuable alternative class to expectiles, called extremiles, which parallels the class of quantiles and includes the family of expected minima and expected maxima. The new class is motivated via several angles, which reveals its specific merits and strengths. Extremiles suggest better capability of fitting both location and spread in data points and provide an appropriate theory that better displays the interesting features of long-tailed distributions. We discuss estimation of extremiles, in an unconditional setting as well as in a regression setting. Implications for exploring trends and spread in regression analysis are provided. The utility of estimated extremiles is illustrated in several examples.

This talk is based on joint work with Abdelaati Daouia.

18:30 – 19:30

High-dimensional tests for spherical location

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Summary: High-dimensional directional data appear in several contexts such as, e.g., text mining and genetics. As is well-known, not all procedures studied in low dimensions remain valid when the dimension p of the data becomes large, sometimes larger than the sample size n . Therefore, in this talk I will tackle one of most classical topics in directional statistics on unit spheres, namely the estimation of the location parameter (under rotational symmetry), and show how the well-known Watson test behaves in the high-dimensional setting. Quite surprisingly, the (n,p) -asymptotic behavior that I will show is "universal" in n and p , meaning that p may go to infinity arbitrarily fast (or slowly) with n .