# CONFERENCIA


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# Robust Inference in Generalized Linear Models: The Density Power Divergence Approach


The generalized linear model (GLM) is a very important tool for analyzing real data in several application domains where the relationship between the response and explanatory variables may not be linear or the distributions may not be normal in all the cases. Quite often such real data contain a significant number of outliers in relation to the standard parametric model used in the analysis; in such cases inference based on the maximum likelihood estimator could be unreliable.

In this work, we develop a robust estimation procedure for the generalized linear models that can generate robust estimators with little loss in efficiency. We will explore two particular special cases in detail -- Poisson regression for count data and logistic regression for binary data. Further, construction of a Robust Wald-type test using the minimum density power divergence estimator for testing statistical hypothesis under the generalized linear model will be discussed as a future research direction. We will also illustrate the performance of the proposals through some real life examples.


**Fecha: 21 de junio de 2016 (martes)**

**Hora: 12,00 horas**

**Lugar: Seminario Sixto Ríos (Aula 215)**

**Facultad de CC. Matemáticas, UCM**

**Organizado por el Departamento de Estadística e Investigación Operativa con la colaboración del Instituto de Matemática Interdisciplinar**