



El Departamento de Estadística del ITAM

anuncia la siguiente sesión de

EL SEMINARIO ALEATORIO

que con el título

Compatible priors for variable selection in linear models

Impartirá

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RESUMEN

Consider a linear regression model (call it the full model) and a reduced model, i.e. a model nested within the full model, wherein the predictors represent a subset of those present in the full model. To perform a Bayesian analysis, one should assign a prior distribution on the regression coefficients and the error variance both under the full model and the reduced model. It is often felt that the two priors should be related somehow. There is both a conceptual and a pragmatic reason for this desideratum. Conceptually, we would like to keep our prior elicitation as consistent as possible across models: this is perhaps most cogent when we perform model determination using Bayes factors. Pragmatically, when many predictors are involved, so that the number of potential reduced models is very large, it is clearly advantageous to have a way to relate priors across models, in order to simplify the elicitation task, possibly specifying only one prior on the parameter space of the full model, and deriving the remaining priors from this unique distribution. Despite these seemingly sensible considerations, there exist only a few contributions in the statistical literature. This talk will examine some of the issues involved and will outline a couple of strategies to tackle the problem. One is parametric, and tries to identify a prior distribution on the reduced model space using the notion of Kullback-Leibler (KL) projection; the other is predictive in nature, and looks at the problem in terms of minimizing the KL divergence between the marginal distributions of the observables under the two models. The former approach reports joint work with Piero Veronese and Eduardo Gutierrez-Pena ; while the latter is based on a collaboration with Jean-Michel Marin, Christian Robert and Gilles Celeux.

Fecha: Viernes 28 de Enero

Hora: 12:50 hrs.

Salón: Sala de Videos II - 2º. Piso Biblioteca

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El Seminario Aleatorio está destinado tanto a profesores como a estudiantes, por lo que el Departamento de Estadística agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.

María F. Rojano Agraz

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