

Talk 6: Christophe Dutang (Grenoble INP, France)

Title: Variable selection and regression trees in multivariate / multipopulation mortality models with closed-form estimators.

Abstract. The maximum likelihood estimation remains the most frequently used method to estimate parameters. But, MLEs are not always tractable and are time consuming. In the context of multivariate generalized linear models, we propose a new way to look at the score in case of single categorical variables for any distribution in exponential family. We illustrate the computation time gains on simulated data and real-world actuarial applications involving cause-of-death mortality modelling. We also investigate the use of explicit estimators for variable selection and for regression trees.