



Special Event in collaboration with
The Federation of European National Statistical Societies



Latent Models

June, 20 2013, Room B5, 11:30-12:45

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The Federation promotes mutual communication, co-operation and interchange of views among all those interested in statistical sciences, in their scientific principles, in a broad sense and in as wide a range of applications as possible. The Federation serves as an agency for the dissemination of technical and scientific information among the National Statistical Societies forming the federation, promoting their mutual collaboration and those activities that can augment the research scientific impact of the members, including international conferences, journals, books and other publications.

PAPERS

Composite likelihood inference for a class of latent variable models for two factor clustering

Francesco Bartolucci, Francesca Chiaromonte, Prabhani Kuruppumullage Don and Bruce G. Lindsay

We consider a discrete latent variable model for arrays of data, which allows for two factor clustering of the observed units when one dimension is referred to consecutive time occasions. We introduce a composite likelihood approach based on considering different subsets of data. The proposed approach is illustrated by a simulation study and an application in genomics

How useful Bayesian inference could be in Model-based clustering?

Gilles Celeux

In this communication, we analyse the pro and the con of Bayesian inference in the model-based clustering context. We exhibit situations where its main drawbacks can be avoided or circumvented. We consider the latent class model for categorical data and derive their (completed) integrated likelihoods without requiring asymptotic approximations. We highlight the interest and the traps of the resulting model selection criteria.

Simplifying complex latent class modeling using bias corrected three-step approaches

Jeroen K. Vermunt

In this contribution, I will first explain the rather simple maximum likelihood (ML) based correction method. Subsequently, I will show how this three-step approach can be used for the stepwise estimation of complex latent class models, such as latent class models with multiple latent variables, latent Markov models, and multilevel latent class models.

Latent Variables Models with Simple Structure for Clustering and Data Reduction

Maurizio Vichi

New latent variable models with simple structure and object clustering are proposed and discussed together with efficient coordinate ascent algorithms. Some examples are given to illustrate the new methodologies and assess their performance.

For more information: fenstats.eu