CONTAMINATION MODELS : ESTIMATION, TEST AND CLUSTERING

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Abstract. In this talk we will introduce the framework of specific two-component mixture models, also known as admixtures. In this context, some well-known phenomenon is affected by an unknown disturbance at different levels. We will give a brief litterature review for the estimation of parameters in this model class, and propose a new estimation procedure based on two samples. Asymptotic properties of the estimators are derived. Then, we will discuss testing methodologies for comparisons between unknown mixture components, and suggest a new clustering algorithm when working with K (K ¿ 2) populations. We will illustrate these developments through actuarial applications around mortality modelling.

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