



## 复旦大学数学科学学院 数学综合报告会

报告题目: **Processing Consistency in Non-Bayesian Inference**

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**摘要:** We propose a coherent inference model that is obtained by distorting the prior density in Bayes' rule and replacing the likelihood with a so-called pseudo-likelihood. This model includes the existing non-Bayesian inference models as special cases and implies new models of base-rate neglect and conservatism. We prove a sufficient and necessary condition under which the coherent inference model is processing consistent, i.e., implies the same posterior density however the samples are grouped and processed retrospectively. We further show that processing consistency does not imply Bayes' rule by proving a sufficient and necessary condition under which the coherent inference model can be obtained by applying Bayes' rule to a false stochastic model.

This is a joint work with Di Xiao.

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