Title: On further developments in Bayesian nonparametric inference

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Abstract

We will review some recent progress in Bayesian nonparametric models. We propose several new algorithms to simulate nonparametric priors. Among such priors we will carefully review the Dirichlet process, finite dimensional Dirichlet process, Beta process and the normalized inverse Gaussian process. We also propose several Bayesian hypothesis tests using nonparametric priors. The proposed tests are based on several available distances. Specially we introduce a goodness of fit test. We will describe how the tests are designed and we include some comparison study using simulations.