IEA/AIE 2018 Submission 62

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Paper 62	
Title:	Bayesian Learning of Finite Asymmetric Gaussian Mixtures
Paper:	(Dec 10, 05:55 GMT)
Author keywords:	Asymmetric Gaussian Mixture Metropolis-Hastings Gibbs sampling MCMC Intrusion detection
EasyChair keyphrases:	agm model (140), asymmetric gaussian mixture (95), acceptance ratio (90), intrusion detection (90), gaussian mixture model (79), component number (70), mixture parameter (70), mixture model (65), bayesian learning process (63), gibbs sampling (60), gaussian mixture (55), proposal distribution (50), synthetic data (50), learning algorithm (50), metropolis hasting (50), mixture weight pj (47), royal statistical society (47), right standard deviation (47), euclidean distance (40), bayesian learning (40)
Topics:	Machine Learning
Abstract:	Asymmetric Gaussian mixture (AGM) model has been proven to be more flexible than the classic Gaussian mixture model from many aspects. In contrast with previous efforts that have focused on maximum likelihood estimation, this paper introduces a fully Bayesian learning approach using Metropolis-Hastings (MH) within Gibbs sampling method to learn AGM model. We show the merits of the proposed model using synthetic data and a challenging intrusion detection application.
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Student Paper Award	Yes

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