INSTITUTO TECNOLÓGICO AUTÓNOMO DE MÉXICO

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Seminario Aleatorio

Sesión 374

Adaptive Random Neighborhood MCMC schemes for large variable selection problems

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Abstract

Data set with many variables (often, in the hundreds, thousands, or more) are routinely collected in many disciplines. This has motivated the study of variable selection in regression models with a large number of variables. A standard Bayesian approach defines a prior on the model space and uses Markov chain Monte Carlo methods to sample the posterior. Unfortunately, simple, default Markov chain Monte Carlo methods often mix poorly.

In this talk, I will describe several adaptive Metropolis-Hastings schemes built around the idea of proposing from a random neighborhood around the current model. I will discuss the ability of these methods to sample from the posterior in high-dimensional problems. The methods will be illustrated on simulated and real data with hundreds or thousands of variables.

Viernes 15 de octubre de 2021, 13:00 hora de CDMX

https://itam.zoom.us/j/97039403155?pwd=UG90ajRKYjdiRWd5eldZdFowS0gwQT09
Meeting ID: 970 3940 3155
Passcode: 886009

El Seminario Aleatorio del Departamento de Estadística del ITAM está destinado tanto a profesores como a estudiantes, por lo que se agradece a los profesores que colaboren invitando a sus alumnos a estas sesiones.