



The University of Chicago
Department of Statistics
STATISTICS COLLOQUIUM

S. V. N. Vishwanathan

Departments of Statistics and Computer Science
Purdue University

Efficiently Sampling Multiplicative Attribute Graphs Using a Ball-Dropping Process

MONDAY, March 12, 2012, at 4:00 PM

133 Eckhart Hall, 5734 S. University Avenue

Refreshments following the seminar in Eckhart 110.

ABSTRACT

In this talk I will describe the first sub-quadratic sampling algorithm for the Multiplicative Attribute Graph Model (MAGM, Kim and Leskove 2010). To design our algorithm, we first define a stochastic *ball-dropping process* (BDP). Although a special case of this process was introduced as an efficient approximate sampling algorithm for the Kronecker Product Graph Model (KPGM, Leskovec et al 2010), neither *why* such an approximation works nor *what* is the actual distribution this process is sampling from has been addressed so far to the best of our knowledge.

Our rigorous treatment of the BDP enables us to clarify the rational behind a BDP approximation of KPGM, and design an efficient sampling algorithm for the MAGM.

Joint work with Hyokun Yun.

For further information and inquiries about building access for persons with disabilities, please contact Dan Moreau at 773.702.8333 or send him an email at dmoreau@galton.uchicago.edu. If you wish to subscribe to our email list, please visit the following website:
<https://lists.uchicago.edu/web/arc/statseminars>.