
Stochastic Bounds for some Stochastic Optimisation Problems

Nihal Pekergin^{*1}

¹Université Paris Est Créteil – Université Paris-Est Créteil Val-de-Marne (UPEC) – France

Résumé

We consider the path length optimisation for an acyclic graph model with discrete random delays attributed to the edges. This problem has been largely studied in the literature and the application of the stochastic ordering is not new. We aim here to give a comprehensible presentation of some kinds of bounds with a particular attention to their numerical analysis. We propose to bound the output distribution in order to overcome the distribution size explosion. The proposed methodology can be applied for other stochastic optimisation problems such as maximum flow, and more generally for the analysis of stochastic discrete event systems whose evolutions are defined by non decreasing operations.

^{*}Intervenant