An Algebraic Multigrid Method for Markovian Queueing Networks

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An Algebraic multigrid method (AMG) is proposed to solve huge, non-symmetric linear systems arising in Markovian queueing networks. A simple way for constructing matrix-dependent prolongation and restriction operators is presented in this paper. Numerical results for multiple queues are given to illustrate the efficiency and robustness of our AMG methods.

This is a joint work with Jian-Feng Cai, Department of Mathematics, The Chinese University of Hong Kong, Hong Kong.