EE 599: Papers on Stochastic Network Optimization

I. INTRODUCTION

The papers listed below are representative of the area of stochastic network optimization. The first set of papers are on the topic of Lyapunov stability and optimization, which is central to the EE 599 course material. Other topics are also listed (mainly focusing on wireless networks) with a sample of papers provided, and may be helpful for course projects. Most papers can be found on author homepages and/or via Google. These sample papers are by no means exhaustive, nor are they necessarily up-to-date. More references can be found on Google.

II. PAPERS

A. Lyapunov Drift for Stability


B. Lyapunov Drift for Performance Optimization


C. Alternative Stochastic Network Optimization Techniques


D. Convex Optimization for Static Networks


E. Imperfect Scheduling and Alternative Lyapunov Functions


F. Multi-Receiver Diversity


G. MIMO, Network Coding, Cooperative Transmission with Queues


H. Energy and Delay Optimality


I. Capacities and Delay Tradeoffs for Ad Hoc and Mobile Networks


J. Network Pricing and Auctions


K. Scheduling for the Low SINR Regime


L. Scheduling for the High SINR Regime


M. Low Complexity Algorithms
