

Queue Stability Analysis in Network Coded Wireless Multicast Network

This letter considers a single hop wireless multicast network. We first introduce a new two-level queuing system consisting of a main queue and a virtual queue, where each packet in the virtual queue is associated with a user index set. Then, we propose a network coding based packet scheduling method to maximize the system input rate under the queue stability constraint. Our analytical and simulation results demonstrate the effectiveness of the proposed solution.