Multiuser MIMO Systems

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Abstract  Communication systems with multiple antennas at both transmitter and receiver (i.e., MIMO systems) have shown considerable promise in providing high-rate, high-quality wireless links. This talk will discuss implications of using MIMO systems in multiple-access networks. The main focus of the talk will be on receiver signal processing for such systems, and in particular on multiuser detection and related issues. Complexity reduction techniques that use turbo processing or adaptive implementations will also be described. Finally, some related issues concerning the spectral efficiencies of such systems will be discussed.