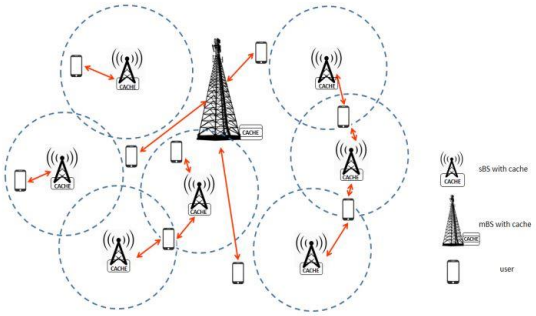
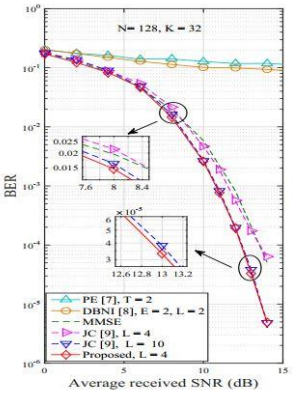
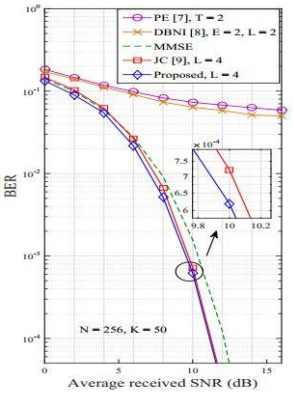
Research Highlights

Wireless communication is one of the most successful technologies shaping our daily lives. Since the invention of wireless communication systems, it has become an essential part of our daily life. Apart from text and voice communication services, today with the evolution and development of technology, it is being used for several other applications such as online gaming, video conferencing, online TV and many more. These modern applications require a large amount of data traffic over wireless channel. Moreover, the number of wireless users has also increased enormously over the past decade. The fast growing data needs within limited resources motivated researchers to develop new technologies for future generation (5G) wireless systems. Large/massive multiple-input multiple-output (MIMO) is a key enabling technology to overcome these limitations. However, one of the major issues with the practical implementation of large/massive MIMO is that it requires sophisticated signal processing architectures for realizing the transmitted signal at the receiving end. In our work, we propose a novel low-complexity iterative sequential detection algorithm for near-optimal detection in uplink massive MIMO systems. The proposed algorithm is attractive for practical applications in massive-MIMO for 5G and beyond system. This work is accepted for publication **IEEE Communications Letters** with the title "*Low-Complexity Near-Optimal Iterative Sequential Detection for Uplink Massive MIMO Systems*"[+]. An offshoot of this work entitled, "*Layered Gibbs Sampling Algorithm for Near-Optimal Detection in Large-MIMO Systems*", has been accepted in prestigious **IEEE WCNC, 2017** at San Francisco, US.







[+]URL: http://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=7778172