Abstract:
LTE which stands for Long Term Evolution is now an agreed-upon protocol that
aims at supporting various high data rate applications particularly encompassing
current and multimedia features. It relies on the merging of OFDMA and MIMO
abilities for affording high rates in frequency selective channels (ISI), thus
efficiently combating inter-symbol interference. The performance of this protocol
has been studied for various channels, however, no study reports such an issue
for Nakagami channel. In this paper, the BLER performance and the achievable
throughput are evaluated in Nakagami-m fading channel with 3 different
transmission modes, namely, SISO, transmit diversity and open loop spatial
multiplexing (OLSM). The OFDM channel is estimated using the least square
approach and the very recently proposed K Best-Soft Sphere Decoder (KBSSD)
is adopted at the receiver side. Also, the impact of the number of retransmissions
on the BLER performance is reported herein.