

# **Abstract**

**Ehab Farouk Badran**

## **Antenna Selection Algorithms in Correlated Fading MIMO Channels**

This paper studies the performance of existing receive antenna Selection algorithms in spatially correlated fading MIMO channels. The antenna subset is Selected based on maximizing the channel capacity. First the most recently proposed algorithms, which are dedicated to i.i.d channel, are revisited and investigated. Then, we apply these algorithms to the case of correlated fading channel. The performance of each algorithm is evaluated and compared in terms of the outage characteristics for different scenarios regarding the angle spread and the required number of antenna elements. Finally, we compare between our results and another algorithm dedicated to correlated channels, namely the correlation Selection algorithm.