

We consider the problem of oblivious transfer (OT) over OFDM and MIMO wireless communication systems where only the receiver knows the channel state information. The sender and receiver also have unlimited access to a noise-free real channel. Using a physical layer approach, based on the properties of the noisy fading channel, we propose a scheme for honest-but-curious parties that enables the transmitter to send obliviously one-of-two files, i.e., without knowing which one has been actually requested by the receiver, while also ensuring that the receiver does not get any information about the other file.