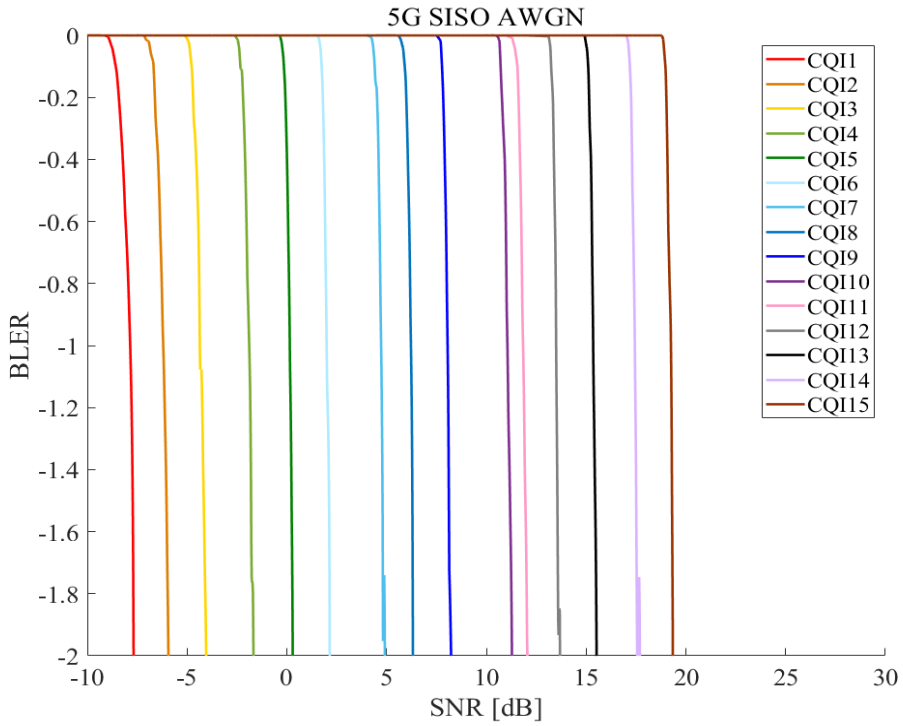
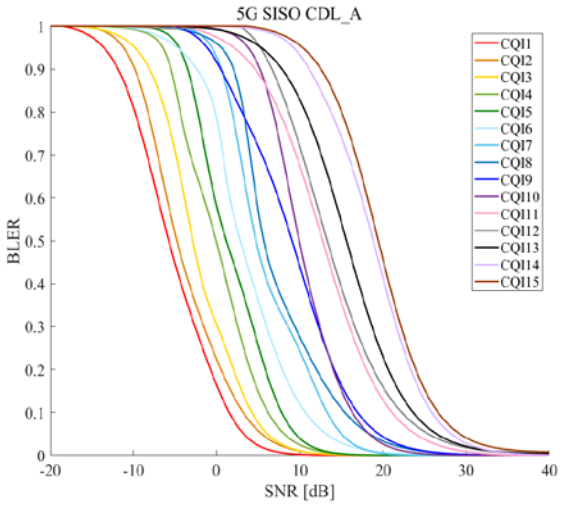
Parameters of Link-to-System Mapping

1. Block Error rate in AWGN

   (LDPC, 6RBs)



2. Block Error rate in SISO-CDL_A



3. EESM Mapping Table (SISO_CDL_A)

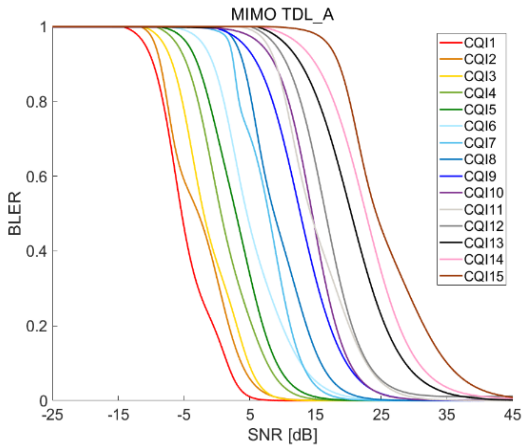
   Using an exponential effective snr mapping (EESM), the effective SNR at the ith snapshot is calculated as follows:

$$\gamma_{eff}^{i}(\alpha_1;\alpha_2) = -\alpha_1 \log\left(\frac{1}{N}\sum_{k=1}^{N}\exp\left(-\frac{\gamma_k^i}{\alpha_2}\right)\right)$$

where N denotes the number of subcarrier.

SISO CDL-A Model			
CQI	α_1	α_2	RMSE (Root Mean square error)
1	3.294	3.230	0.150
2	1.874	1.880	0.357
3	1.607	1.594	0.065
4	1.184	1.175	0.159
5	1.286	1.283	0.140
6	1.359	1.359	0.055
7	3.642	3.628	0.170
8	3.256	3.228	0.171
9	5.563	5.543	0.110
10	16.259	16.204	0.075
11	13.685	13.604	0.329
12	17.988	18.079	0.778
13	23.971	23.970	0.555
14	29.306	29.205	0.210
15	33.590	33.833	0.533

4. Block Error rate in MIMO TDL_A



5. EESM Mapping Table (MIMO_TDL_A)

MIMO TDL-A Model			
CQI	α_1	α_2	RMSE (Root Mean square error)
1	0.088	0.126	1.581
2	0.114	0.154	0.834
3	0.200	0.252	0.730
4	0.280	0.306	0.867
5	0.511	0.525	0.859
6	0.718	0.729	2.072
7	2.664	3.554	1.526
8	2.465	2.665	1.538
9	3.200	4.695	1.782
10	6.532	8.174	1.824
11	6.588	8.619	0.703
12	9.985	11.538	1.125
13	11.190	14.225	1.393
14	15.933	19.071	0.973
15	20.410	38.530	1.399