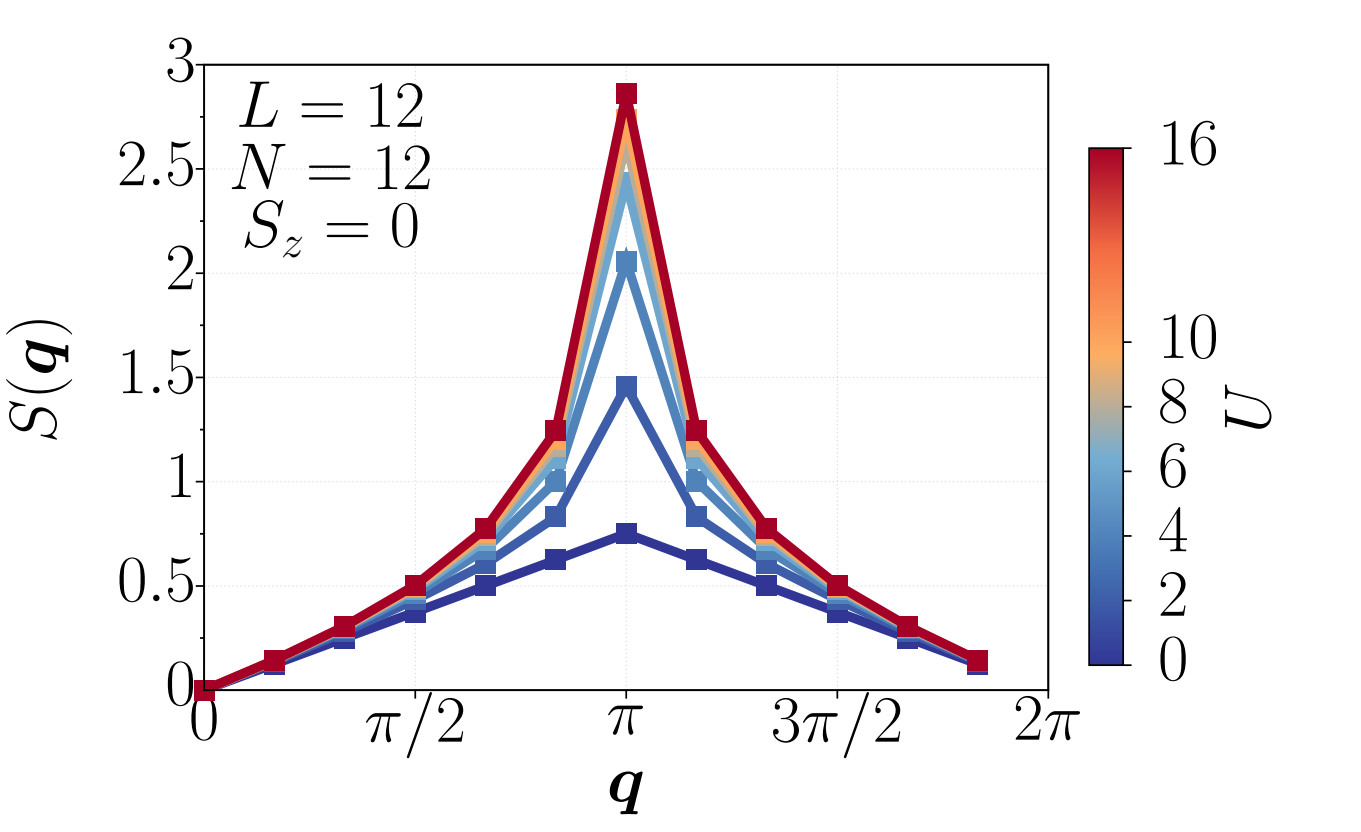

$L = 12$
$N = 12$
$S_z = 0$
$S(\boldsymbol{q})$
$\boldsymbol{q}$
0
0.5
1
1.5
2
2.5
3
0
$\pi/2$
π
$3\pi/2$
2π
U
16
10
8
6
4
2
0