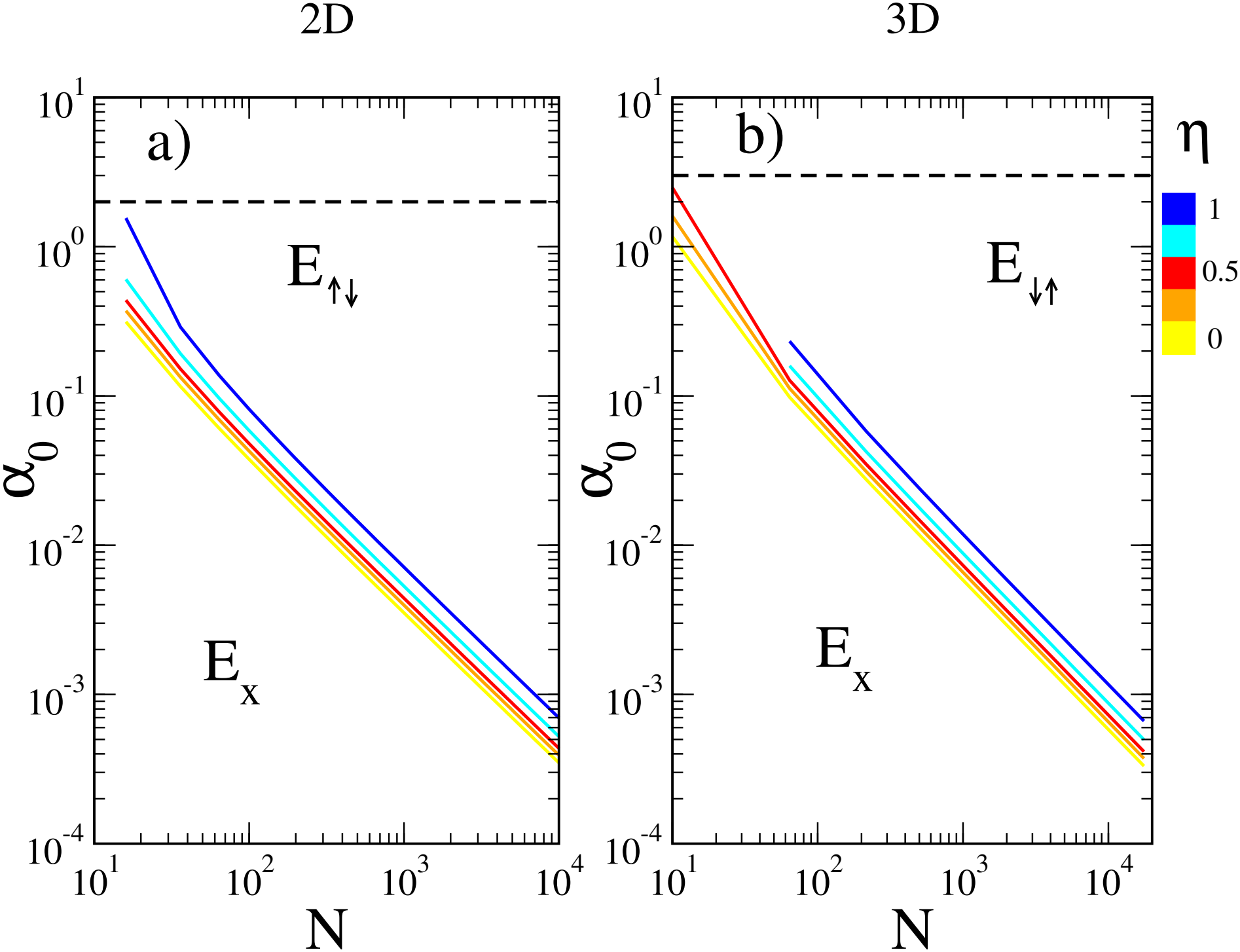
2D
3D
a)
b)
$E_{\uparrow\downarrow}$
$E_{\downarrow\uparrow}$
E_x
E_x
α_0
α_0
N
N
η
1
0.5
0
10^{1}
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{1}
10^{2}
10^{3}
10^{4}