

A heatmap showing the critical disorder strength W_c as a function of system size N (y-axis, ranging from 8 to 12) and disorder strength W (x-axis, ranging from 0.0 to 7.5). The color scale represents W_c , ranging from 0.0 (blue) to 1.0 (red). The plot is divided into two regions: 'extended' (left, $W < W_c$) and 'localized' (right, $W > W_c$). The transition from extended to localized states occurs at $W_c \approx 2.0$ for $N=8$ and increases with N .

