

ERRATA

Erratum: Eigenspectrum and localization for diffusion with traps
[Phys. Rev. E 50, 1093 (1994)]

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PACS number(s): 05.40.+j, 05.50.+q, 64.60.Fr, 99.10.+g

We have made two errors that do not affect the conclusions but do affect the accuracy of the numerical results and the displayed figures (Figs. 5 and 6), as well as the corresponding text and caption for Fig. 7. The first error is that the data presented in Fig. 3 have inadvertently included an arbitrary normalization constant. This would not have affected the numerical estimation of the stretched exponent \bar{d}_0 if $\ln \rho$ were in the true asymptotic regime; however, in the present data, the incorrect normalization unfortunately has significant effects. As it turns out, this problem cannot be rectified simply by inserting the correct normalization but requires a more elaborate analysis. Such an analysis was recently performed as part of a new study [1] and will be reported subsequently. Their result gives $\bar{d}_0/2 \approx 2$ in two dimensions and ≈ 3 in three dimensions. The second error is in the correspondence of the participation ratios $P(\lambda)$ with the correct eigenmodes. Due to a simple numerical error, the values of $P(\lambda)$ displayed in Figs. 5 and 6 were not plotted against the associated values of λ . The corrected versions of these figures are produced below. Accordingly, the second and fourth sentences in the last paragraph of Sec. VI should be modified:

Even though . . . localized, such as some states corresponding to the center of the spectrum near $\lambda=0$, . . . Figure 7(a) corresponds to one of the modes with $\lambda=0$, which happens to be extremely localized, Fig. 7(b) corresponds to the maximum positive eigenvalue, and Fig. 7(c) corresponds to a mode in the intermediate part of the spectrum.

The caption for Fig. 7 must be modified correspondingly:

. . . corresponding to the middle ($\lambda=0$), upper ($\lambda=0.8390$. . .), and an intermediate part of the spectrum . . .

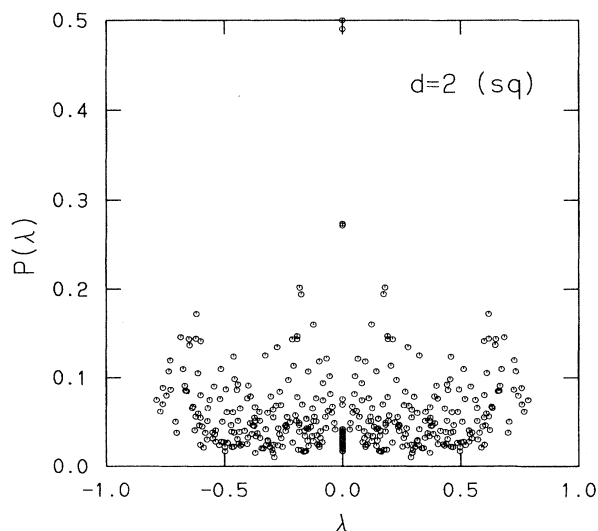


FIG. 5. Participation ratio $P(\lambda)$ for the spectrum of a 400×400 transition probability matrix in $d=2$ at critical disorder. “sq” refers to the square lattice.

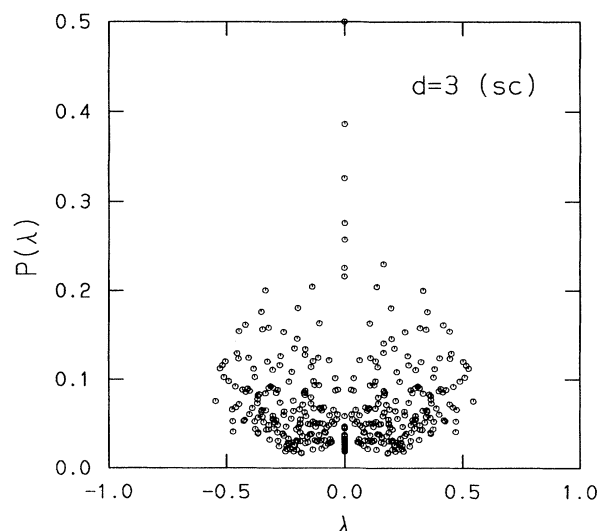


FIG. 6. Participation ratio $P(\lambda)$ for the spectrum of a 400×400 transition probability matrix in $d=3$ at critical disorder. “sc” refers to the simple cubic lattice.

[1] S. Mukherjee and H. Nakanishi (unpublished).