Errata for Asymptotic solution of interaction random walks in one dimension

Phys. Rev. Lett. **51**, 1729 (1983)

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This manuscript contains one misprint and one error. Equation (4) should read:

$$\langle s_N\rangle = \frac{1}{2^N}\sum_{s=2}^{N+1} sP_N(s) = (N+2) - \langle T_s^N\rangle/2^N \ .$$

In Eq. (14b), the power-law prefactor in the decay law is incorrect; it should be $f_N \sim (N/N_x)^{1/2}\,\exp\big[-(N/N_x)^{1/3}\big]$. This result can be obtained from our approach by including the power-law prefactor in the limiting small-s behavior of $P_N(s)$. From Eq. (3) of our letter, one may readily derive

$$P_N(s) = \langle T_s^N - 2T_{s-1}^N + T_{s-2}^N\rangle \simeq \langle \frac{\partial^2 T_s^N}{\partial s^2}\rangle \ .$$

In a representation where the transfer matrix is diagonal,

$$\langle T_s^N\rangle = \sum_{k=1}^{N} \big[\lambda^{(k)}\big]^N \sum_{n=1}^{s} \big[e_n^{(k)}\big]^2$$

where $\lambda^{(k)}$ is the $k^{\rm th}$ eigenvalue and and $e_n^{(k)}$ is the $n^{\rm th}$ component of the $k^{\rm th}$ eigenvector of T_s, respectively. These resutls leas to $P_N(s) \simeq N^2 s^{-5}\big[2\cos\pi/(s+1)\big]^N$ in the limit $s/N \to 0$. With this asymptotic form of the $P_N(s)$, one readily obtained the correct power-law prefactor in f_N from the steepest-descent approach of our letter.

We are grateful to P. Grassberger and T. C. Lubensky for helpful suggestions.