Erratum to

Indistinguishability of Percolation Clusters


by Russell Lyons and Oded Schramm

In the proof of Lemma 3.6, $\Pi_e G = G$ should be $\Pi_e G \cup \Pi_{-e} G = G$.

In the proof of Theorem 3.3, just before the first displayed equation, $n \in \mathbb{Z}$ should be $n \in \mathbb{N}$. Replace the first displayed equation by

$$Y_{n, e} := \hat{P}[\mathcal{E}^n_e | \omega] \text{ is } \mathcal{F}_{-e}\text{-measurable.}$$

Replace the second displayed equation by

$$\hat{P}[\mathcal{E}^n_e \cap \Pi_e \mathcal{B}] = \mathbb{E}\left[\hat{P}[\mathcal{E}^n_e \cap \Pi_e \mathcal{B} | \mathcal{F}]\right] = \mathbb{E}\left[Y_{n, e} 1_{\Pi_e \mathcal{B}}\right] = \mathbb{E}\left[Y_{n, e} \mathbb{P}[\Pi_e \mathcal{B} | \mathcal{F}_{-e}]\right]$$

$$= \mathbb{E}\left[Y_{n, e} 1_{\Pi_{-e} \mathcal{B} \cup \Pi_e \mathcal{B}} \mathbb{P}[e \in \omega | \mathcal{F}_{-e}]\right] = \mathbb{E}\left[Y_{n, e} 1_{\Pi_{-e} \mathcal{B} \cup \Pi_e \mathcal{B}} Z(e)\right]$$

$$\geq \mathbb{E}\left[Y_{n, e} 1_{\mathcal{B}} Z(e)\right] \geq \delta \mathbb{E}\left[Y_{n, e} 1_{\mathcal{B}}\right] = \delta \hat{P}[\mathcal{E}^n_e \cap \mathcal{B}].$$

The three sentences of the first paragraph of the proof of Lemma 4.2 beginning “Let $\gamma \in \Gamma$” should be replaced by the following: “To prove that $\text{freq}$ is $\Gamma$-invariant, note that for every $\gamma \in \Gamma$, there is an $m \in \mathbb{N}$ such that with positive probability $X(m) = \gamma o$. Hence for every measurable $A \subset [0, 1]$ such that $\alpha(C) \in A$ with positive probability, we have $\alpha(\gamma C) \in A$ with positive probability. A similar argument shows that if $\alpha(\gamma C) \in A$ with positive probability, then $\alpha(C) \in A$ with positive probability.”

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