

Spin models on random graphs with controlled topologies beyond degree constraints

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2009 J. Phys. A: Math. Theor. 42 169801

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Corrigendum

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We regret that appendix A.1 contains an error in the last line of (A.5). This impacts only the interpretation of the kernel $Q(k, k')$ and hence does not affect the remainder of the paper. The last eight lines of A.1 are to be replaced by the following correction:

$$\begin{aligned} \mathcal{P}[\text{conn}|k, k'] &= \frac{\sum_{\mathbf{c}} \text{Prob}(\mathbf{c}) \sum_{i < j} c_{ij} \delta_{k, k_i(\mathbf{c})} \delta_{k', k_j(\mathbf{c})}}{\sum_{\mathbf{c}} \text{Prob}(\mathbf{c}) \sum_{i < j} \delta_{k, k_i(\mathbf{c})} \delta_{k', k_j(\mathbf{c})}} \\ &= \frac{kk'}{NcF(k)F(k')} Q(k, k') \end{aligned} \quad (\text{A.5})$$

(full details of the derivation of (A.5) will be published elsewhere). Hence,

$$Q(k, k') = \frac{\mathcal{P}[\text{conn}|k, k']}{\mathcal{P}[\text{conn}]} \frac{c^2 F(k)F(k')}{kk'}, \quad (\text{A.6})$$

i.e. $Q(k, k')$ controls the probability for two randomly drawn vertices with degrees k and k' to be connected, divided by the overall probability of two randomly drawn vertices to be connected (irrespective of their degrees).