

A Modern Approach to Critical Phenomena: Corrections

This is not the final list, and I'll be grateful to anyone bringing other mistakes in the book to my attention.

Section 2.1

Eq. (2.16) should read

$$\langle \mathbb{C}_{k_j-1} | e^{i\sum (\hat{H}_i + \hat{N})} | \mathbb{C}_k \rangle = \langle \mathbb{C}_{k_j-1} | \mathbb{C}_k \rangle e^{i\sum_{k=1}^j \hat{H}_i + i\sum_{k=1}^j \hat{N}_k i = \hbar \mathbb{C}_{k-1} j \mathbb{C}_k i} + O(\hbar^2)$$

Section 2.2

The first line in Eq. (2.23) should be without the sum in the exponent.

Section 2.3

It should be $\hbar^2 k^2 = 2m$ in the denominator of Eq. (2.34).

Section 2.4

On page 39, line 9, the field \mathcal{H} should be defined as $\mathcal{H} = \mathbb{C}_1 = N^{1-2}$.

Section 3.3

In the solution of the problem 3.3, the combinatorial factor instead of $6(M+6)$ should be $6(M+7)$.

Section 5.4

Eq. (5.36) should be without the factor of T in the denominator.

Section 6.1

Eq. (6.6) should be without the factor of T multiplying $\mathbb{C} S_\nu$.

Section 6.4

In the first line of Eq. (6.56) it should be $2\frac{1}{4}\mu_{\leq}$ in the argument of the cosine.
Seven lines above Eq. (6.82), it should read $T \approx T_{KT} = \frac{1}{4}J=2$.

Section 6.6

In Eq. (6.90), the vector $\hat{n}(\mathbf{x})$ should be $n(\mathbf{x})$, to be in accord with the previous notation.

Section 8.3

The first term in Eq. (8.23) should be multiplied by the inverse temperature.

Section 8.5

In the last equation on page 193 the prefactor in front of the inverse tangent should be $10=\sqrt{239}$.

Igor Herbut, April 2009.