

Errata: QFT and CMT

I am grateful to Ben Strekha for bringing the following to my attention.
Important errata in **boldface**

Chapter 1

page 6, equation (1.41) shouldn't have a T in the denominator

page 9, 3 lines below equation (1.58), $d = 3N - 1 \simeq 3N \rightarrow d - 1 = 3N - 1 \simeq 3N$
page 16, Equation (1.120)

$$\sum_i p_i dE_i = \sum_i \frac{dE_i}{dV} dV$$

(is currently missing a dV in the numerator on the right hand side).

Chapter 2

page 23, equation (2.23) and (2.24) $dh \rightarrow \partial h$ and $d^2h \rightarrow \partial^2h$ in the denominators
page 24, equation (2.25):

$$E = -J \sum_{i=0}^{N-1} s_i s_{i+1}$$

(currently missing the $i = 0$ in the limit of the sum)

page 25, equation (2.28) the right hand side lower limit on sum: $t_i = \pm \rightarrow t_i = \pm 1$

Chapter 3

page 31, second line. $U(x, x' : t) \rightarrow U(x, x'; t)$

page 32, equation (3.22) should have an index n for the sum.

page 37, equation (3.58).

$$\langle s_i \rangle = \langle 0 | \sigma_3 | 0 \rangle = \langle s \rangle$$

page 38, in the sentence continuing after (3.60) $\exp(2K^*) \rightarrow \exp(-2K^*)$.

Chapter 5

page 57, equation (5.24) $\exp(-iS_c/\hbar) \rightarrow \exp(iS_c/\hbar)$.

Chapter 6

page 73, equation (6.2) drop the comma in $|\theta, \phi \rangle$

page 89, equation (6.118) drop the vertical bar in $e^{-\beta H} | \dots$

page 90, equation (6.127) $\Psi(0) (\rightarrow (\Psi(0))$.

page 92, equation (6.142):

$$G(\omega_n) = -\frac{1}{\beta} \int_0^\beta e^{i\omega_n \tau} e^{-(\Omega_0 - \mu)\tau} (1 - n_F(\Omega_0 - \mu)) d\tau$$

(currently $d\tau$ is missing the integration measure $d\tau$).

page 96, equation (6.176)

$$\int_{-\infty}^{\infty} e^{-\frac{1}{2}mx^2 + Jx} dx = \sqrt{\frac{2\pi}{m}} \exp\left[\frac{J^2}{2m}\right].$$

(currently is missing the integration measure dx)

Chapter 10

page 160, equation (10.18) is missing an "=" sign after lim

page 162 Eqn. 10.27, the right hand side should be $+\frac{1}{2\pi} \ln |\mathbf{r} - \mathbf{r}'|$.

page 165, equation (10.36) $e^S(s) \rightarrow e^{S(s)}$

page 167, second to last paragraph before 10.2.3 $t_i = s_1 s_{i+1} \rightarrow t_i = s_i s_{i+1}$.

Chapter 11

page 173 Eqn. 10.61 RHS should read $= \sum_{\alpha} g_{\alpha} \langle i | \mathcal{O} | j \rangle$.

page 190, equation (11.44), exponent on right hand side: $K'(s_0 s_1 + .. \rightarrow K'(s_1 s_2 + ...$

page 194, Figure 11.3 second $K^* + \Delta K$ should be $K^* + \Delta K'$

Chapter 12

page 205, equation (12.36) $3u_0 \rightarrow 4u_0$.

Chapter 13 page 226, equation (13.11) $S_0^*(\phi_f) \rightarrow S^*(\phi_f)$

page 226, equation (13.15) drop the comma after ϕ

page 226, equations (13.17) and (13.18) $\mathbf{s} \rightarrow s$.

page 230, equation (13.44) $u_0 \rightarrow \frac{u_0}{(2!2!)}$.

page 232, equation (13.53) $u_0) \rightarrow u_0$

page 235 before equation (13.76) "the u_0 term in Eq. (13.66)" \rightarrow the " u_0 term in (13.67)".

page 237, equation (13.93) in the argument of ϕ' , $0/s \rightarrow 0 \cdot s$.

page 240, equation (13.111) $t \rightarrow |t|$.

page 243, equation (13.134)

$$\frac{du_0}{dl} = (4 - d)u_0 + \mathcal{O}(u_0^2) = \varepsilon u_0 + \mathcal{O}(u_0^2)$$

page 249, equation 3.157), (13.161), (13.162): need = sign after limits

Chapter 14

page 259, right after equation (14.51) $\mathfrak{l}_0^2 \rightarrow \lambda_0^2$

page 260, equation (14.52) and a sentence between (14.52) and (14.53) $\mathfrak{l}_0^2 \rightarrow \lambda_0^2$.

page 260, after equation (14.53) $\mathfrak{l}_0^2 \rightarrow \lambda_0^2$

page 260, equation (14.54) $\lambda^2 \rightarrow -\lambda^2$

page 261, equation (14.60) $B(m_0^2 \rightarrow B(m_0..), ...)$ and in the mini-paragraph following (14.60).

page 261, equation (14.61) and (14.62) $\mathfrak{l}_0^2 \rightarrow \lambda_0^2$

page 277, on (14.113) , $d \rightarrow \partial$, in the next line $\partial \rightarrow d$

Chapter 15

page 287, equation (15.12) $e_2 \rightarrow \varepsilon_2$.

Chapter 16

page 306, last paragraph: "could" repeated

Chapter 17 **page 321**, equation ((17.11) $\exp(ipx) \rightarrow \exp(-ipx)$

page 332, equation (17.102)

$$..... = \frac{1}{2} [(\partial_{\tau}\phi)^2 + (\partial_x\phi)^2],$$

(currently is missing a "(" on the x-derivative term.)

page 329, equation (17.76) $\phi_+^2 \rightarrow \phi_+^2(0)$.

page 360 equation 18.168 $\delta \rightarrow \sqrt{\delta}$ within arctan.

page 360 LINE ABOVE equation 18.171:
What if we start *on* the line $x = -y$?