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 $d^2 h \rightarrow \partial^2 h$ 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 $|\theta, \phi >$
page 89, equation (6.118) drop the vertical bar in $e^{-\beta H}|...$
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 \(+ \frac{1}{2\pi} \ln |r - r'|.\)

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

Page 167, second to last paragraph before 10.2.3 \( t_i = s_i s_{i+1} \rightarrow t_i = s_i s_{i+1}.\)

Chapter 11

Page 173 Eqn. 10.61 RHS should read \( \sum_o g_o \langle i | \mathcal{O} | j \rangle.\)

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

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 \( \phi\)

Page 226, equations (13.17) and (13.18) \( s \rightarrow s.\)

Page 230, equation (13.44) \( u_0 \rightarrow \frac{u_0}{\sqrt{2t'}}.\)

Page 232, equation (13.53) \( u_0 \rightarrow u_0\)

Page 233 before equation (13.76) “the \( u_0 \) term in Eq. (13.66)” → the “\( u_0 \) term in (13.67)”.

Page 237, equation (13.93) in the argument of \( \phi', 0/s \rightarrow 0 \cdot s).\)

Page 240, equation (13.111) \( t \rightarrow |t|.\)

Page 243, equation (13.134)

\[
\frac{du_0}{dt} = (4 - d)u_0 + \mathcal{O}(u_0^2) = \varepsilon u_0 + \mathcal{O}(u_0^2)
\]

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

Chapter 14

Page 259, right after equation (14.51) \( l_0^2 \rightarrow \lambda_0^2\)

Page 260, equation (14.52) and a sentence between (14.52) and (14.53) \( l_0^2 \rightarrow \lambda_0^2.\)

Page 260, after equation (14.53) \( l_0^2 \rightarrow \lambda_0^2\)

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

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

Page 261, equation (14.61) and (14.62) \( l_0^2 \rightarrow \lambda_0^2\)

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)

\[
\ldots = \frac{1}{2} \left[ (\partial_x \phi)^2 + (\partial_x \phi)^2 \right],
\]

(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.
What if we start \textit{on} the line $x = -y$?