

Mesoscopic Physics of Electrons and Photons,
E. Akkermans and G. Montambaux,
Cambridge University Press (2007)

Errata and misprints

May 2016

- *p.136, the last term in the upper equation (4.165) should be :*

$$-i\tau_e \mathbf{q} \cdot \mathbf{j}_\omega$$

- *p.157, in eq. (5.40), one should read :*

$$Z(t) = e^{-t/\tau_\gamma}$$

- *p.224, in eq. (6.137), the summation index in the sum is incorrect. One should read :*

$$\sum_{\beta} \Gamma_{\alpha\beta, \beta\alpha}^{(c)}(\mathbf{Q}) \dots$$

- *P.277, in eq. (7.30), replace $\sigma_0(\omega)$ by σ_0 .*

- *p.290, after eq. (7.76), one should read :*

Choose the gauge $A_x = By$, $y \in [-W/2, W/2]$.

- *p.290, two lines after eq. (7.77), read :*

... the same shift, $e^2 DB^2 W^2 / 3\hbar^2$, ...

- *p.295, in the caption of figure 7.7, one should read magnesium instead of lithium.*

- *p.375, the unnumbered equation following eq. (10.15) should be :*

$$K(\omega) = \Delta \delta(\omega) = \delta(s)$$

and $\tilde{K}(t)$ has the dimension of an energy, so that the next equation should be :

$$\tilde{K}(t) = \frac{\Delta}{2\pi}$$

- *p.379, eq. (10.23) and the accompanying sentences should be :*

The distribution of the eigenvalues ϵ_1 and ϵ_2 satisfies

$$P(\{h_{ij}\}) dh_{11} dh_{22} dh_{12} = P(\epsilon_1, \epsilon_2, \theta) d\epsilon_1 d\epsilon_2 d\theta .$$

Let us introduce the Jacobian $\mathcal{J}(\epsilon_1, \epsilon_2, \theta)$ of the transformation, such that $dh_{11}dh_{22}dh_{12} = \mathcal{J}d\epsilon_1d\epsilon_2d\theta$. Then we have

$$P(\epsilon_1, \epsilon_2, \theta) = P(\{h_{ij}\})\mathcal{J}(\epsilon_1, \epsilon_2, \theta) = \frac{\mathcal{J}(\epsilon_1, \epsilon_2, \theta)}{\mathcal{Z}} e^{-\lambda(\epsilon_1^2 + \epsilon_2^2)}$$

We check that $\mathcal{J} \propto |\epsilon_1 - \epsilon_2|$ and the distribution of eigenvalues is given by ...

- *p.394, on the numerator of eqs.(10.67,10.19), one should read Δ instead of Δ^2 .*
- *p.471, there is an inversion in the sentence following eq. (13.34). One should read :*
- *p.490, in eqs.(13.97,13.100), read :*

$$U_\omega(\mathbf{r}_1 - \mathbf{r}_2)U_{-\omega}(\mathbf{r}'_1 - \mathbf{r}'_2)$$

The parameter F varies between 1 for strong screening ($\kappa \rightarrow \infty$) and 0 for weak screening ($\kappa \rightarrow 0$).

- *p.509, eq. (13.195) should be*

$$\frac{1}{2} \langle \Phi^2 \rangle_T = \frac{e^2 T}{\pi \sigma_0 \hbar^2 a} \int_0^t d\tau \log(2q_c |\mathbf{r}(\tau) - \mathbf{r}(\bar{\tau})|) \sim \frac{e^2 T}{\pi \sigma_0 \hbar^2 a} t \ln Tt$$

Acknowledgements : O. Legrand, J.N. Fuchs, C. Miniatura, C. Texier.