

Errata for book *Natural Image Statistics*

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Book: Page numbers refer to preprint/published version.

1. p. 73/70, Eq. (4.7). The value of pdf on the upper row should be $\frac{1}{2}$ instead of 1.
2. p. 48/48, Exercice 3. First sentence should be “Prove (2.16) and (2.17).”
3. p. 60/59, caption of Figure 3.8. “distance from zero” should be “distance from zero frequency”
4. p. 125/119, Section 5.8.2. It should be mentioned that this theory is only true in the limit of infinitely large images, or if they are cyclic. Otherwise, border effects will make the theory only approximately correct.
5. p. 225/215, Equation (10.5). The variable s_i should be denoted by some other symbol because it is not the same s_i as in other equations.
6. p. 248/237, last paragraph of Exercice 2 c: “Express φ ” should be “Express φ_x ”.
7. p. 284/273, caption of Figure 12.10. The following explanation should be added: “Horizontal axis: coordinate in image space (1D slice). Vertical axis: grey-scale value of synthesized image.”
8. p. 163/172, Eq. (7.19). “log” is missing in front of the latter term, which should be $\log \frac{4\sqrt{3}}{\pi}$.
9. p. 317/305, soon after Equation (14.11). “gradient descent” should be “gradient ascent”.
10. p. 399/383, Equation (18.11). The transposes in the last term are wrong, they should be $\mathbf{W}\nabla f(\mathbf{W})^T\mathbf{W}$.
11. (*Added in April 2014*) p. 261/250, Fig. 11.7.(e) The phases computed are global phases while we should be computing local phases, so this phase plot is wrong. (However, the result should be correct since in our original 2001 paper in Vision Research, the phases were computed correctly.)

Matlab package

1. (*Added in April 2014*) See point 11 above: the phases are computed by `findoptimalparas.m` in lines 64-81 which are wrong. A proper fitting of Gabor functions should be done, instead of inputting Fourier gratings, to compute the local phases.