Errata 10/25/04

Page 39. just above equation (1.22) the text should read: defined as the integral of **f(x,y)** along a line L, as shown in Figure 1.28:

Page 112. The first sentence should read: If the ultrasound wave moves from a high to a low acoustic impedance, i.e., $Z_1>Z_2$, then the reflected wave will undergo…

Page 122. Figure 3.8 legend should read (Left) The separation between the two shaded objects Δx is greater than the FWHM of the beam.

Page 142. Line 4. The pulse repetition rate (PRR) is defined as the sampling frequency, and therefore the relationship…

Page 169. After equation (4.29) the sentence should read:
In the field of high-resolution NMR spectroscopy for chemical analysis, the value of $1/T_2^+$ is very small ….

Page 174. The values of sigma are incorrect. The difference in resonance frequencies is correct, but water protons resonate at a higher frequency than those in fat since the water protons are less shielded.

Page 180, equation (4.49) is missing the 2π terms and should be:

$$S\left(k_x,k_y\right)\propto \int_{slice}\int_{slice} \rho\left(x,y\right)\, e^{-j2\pi k_x x} e^{-j2\pi k_y y}\, dxdy$$

Page 195, equation (4.55) should be:

$$I\left(x,y\right)\propto \frac{\rho\left(x,y\right)\left(1-e^{-TR/T_1}\right)e^{-TE/T_2^*}\sin\alpha}{1-e^{-TR/T_1}\cos\alpha}$$

Page 223. Figure 5.4 legend. (Left) For a sinc PSF, the signals from the two point sources can be resolved when the separation between them is **greater** than half the width of the main lobe of the sinc function.

Equation (5.3) is missing a factor two in the denominator of the exponential, so should be:

$$\mathrm{h}\left(\mathrm{x}\right)=\frac{1}{\sqrt{2\pi\sigma^2}}\exp\left(-\frac{\left(\mathrm{x}-\mathrm{x}_0\right)^2}{2\sigma^2}\right)$$

And in equation (5.4) the square root extends too far and covers σ, so should read:

$$\mathrm{FWHM} = 2\sqrt{2\ln 2}\ \sigma \ \cong\ 2.36\sigma$$