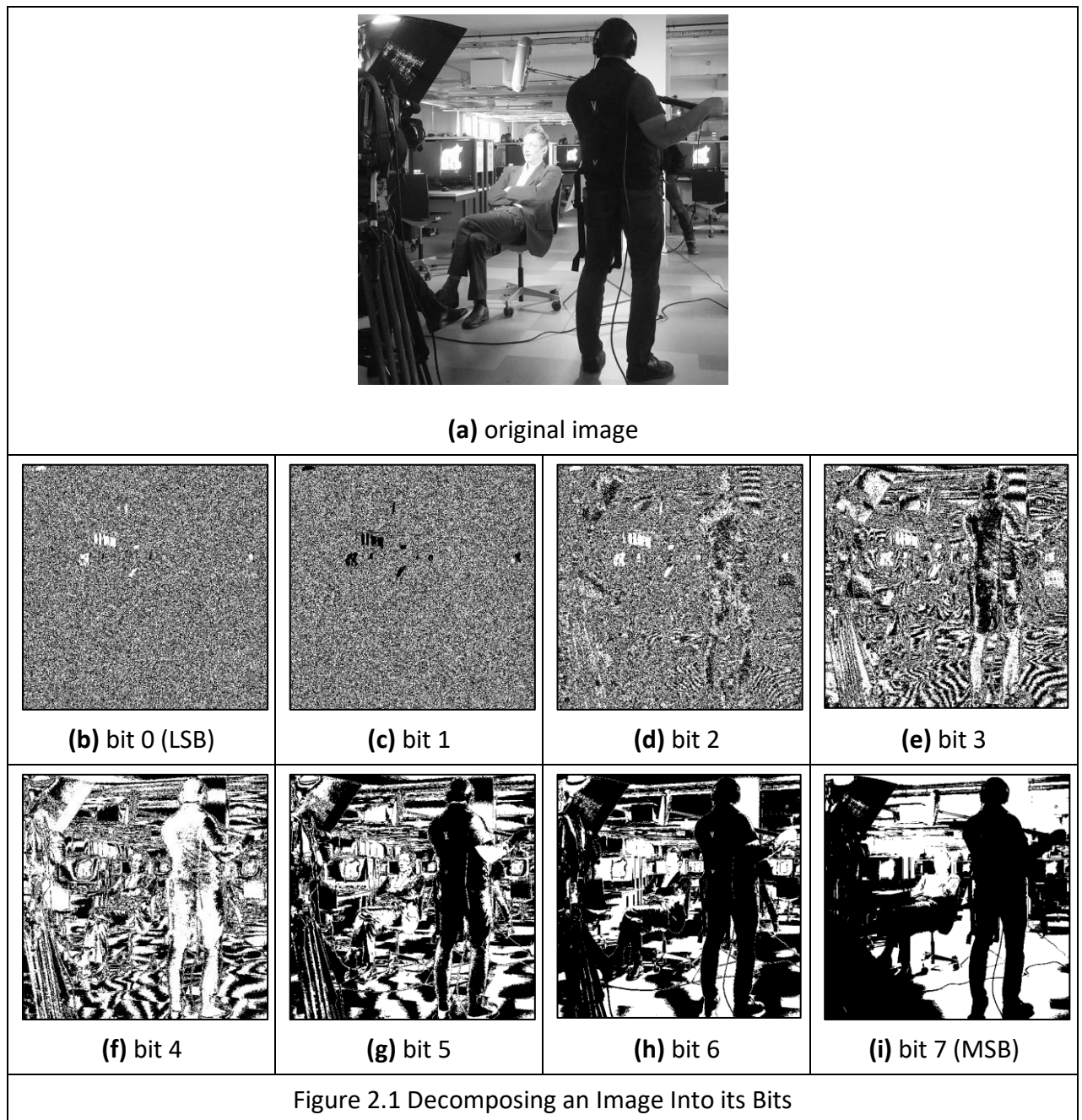# Feature Extraction and Image Processing – Fourth Edition

Known Errors

Apologies, some are ours and some come from mistakes in the proof stage. I actually found them when I was writing my new book called *Do'h! Fourier* http://www.southampton.ac.uk/~msn/Doh_Fourier/ to be published by Wiley in 2022.

P36 (it doesn't really matter, but the bits were the wrong way round. It makes more sense this way though..)

(a) original image

(b) bit 0 (LSB)   **(c)** bit 1   **(d)** bit 2   **(e)** bit 3

(f) bit 4   **(g)** bit 5   **(h)** bit 6   **(i)** bit 7 (MSB)

Figure 2.1 Decomposing an Image Into its Bits

P43

A sentence after Eq. 2.13 should read

Correlation gives a measure of the match between the two signals $p_2(t)$ and $p_1(t)$. When $p_2(t) = p_1(t)$ we are correlating a signal with itself and the process is known as *autocorrelation*.

P44 (argh! Not Kronecker..)

$$delta(t) = \delta(t) = \begin{cases} \infty & t = 0 \\ 0 & \text{otherwise} \end{cases} \tag{2.14}$$

P52

The index in Figure 2.13 is *x*, not *t*

P56

$$\mathbf{FP}_{u,v} = \frac{1}{MN} \sum_{x=0}^{N-1} \sum_{y=0}^{M-1} \mathbf{P}_{x,y} e^{-j2\pi\left(\frac{ux}{N}+\frac{vy}{M}\right)} = \frac{1}{MN} \sum_{x=0}^{N-1} \left\{ \sum_{y=0}^{M-1} \mathbf{P}_{x,y} e^{-j2\pi\left(\frac{vy}{M}\right)} \right\} e^{-j2\pi\left(\frac{ux}{N}\right)} \tag{2.27}$$