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ERRATUM

Gabor filters and phase portraits for the detection of architectural distortion in mammograms

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Due to a processing error the presentation of the sixth sequence of Sect. 2.1 and Eqs. 8 and 10 was incorrect. The correct versions are given below.

Let $\theta(x,y)$ be the texture orientation at (x,y), and $g_k(x,y)$, $k = 0, 1,..., 179$, be the Gabor filter oriented at $\alpha_k = -\pi/2 + \pi k/180$. Let $I_{\mathrm{HPF}}(x,y)$ be the high-pass-filtered version of the mammogram being processed, and $I_k(x,y) = (I_{\mathrm{HPF}} * g_k)(x,y)$ represent the Gabor-filtered images, where the asterisk denotes linear convolution. Then, the orientation field angle of $I(x,y)$ is given by

$$\theta(x,y) = \alpha_{k_{\max}} \quad \text{where} \quad k_{\max} = \arg\left\{\max_k[|I_k(x,y)|]\right\}. \qquad (2)$$

$$\theta_{\mathrm{f}}(x,y) = \frac{1}{2}\arctan\left(\frac{(h * s)(x,y)}{(h * c)(x,y)}\right), \qquad (8)$$

$$M_{\mathrm{f}}(x,y) = (h * M_{\mathrm{CLS}})(x,y), \qquad (10)$$

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