

Errata

Page 53: Equation 3 should read:

$$A = \sum_{u,v} w(u,v) \begin{bmatrix} \left(\frac{\partial I(u,v)}{\partial x}\right)^2 & \left(\frac{\partial I(u,v)}{\partial x} \frac{\partial I(u,v)}{\partial y}\right) \\ \left(\frac{\partial I(u,v)}{\partial x} \frac{\partial I(u,v)}{\partial y}\right) & \left(\frac{\partial I(u,v)}{\partial y}\right)^2 \end{bmatrix}$$

Page 53: Below Equation 3, the following text should be removed because it is not true:

“Second derivatives are better suited for finding lines and corners than first derivatives, i.e., gradients. Second derivatives are only non-zero at places in the image where there is a gradient change, not where there is a constant gradient. A constant gradient is usually not defined as a line. Most corner detectors utilize the Hessian matrix, in some way, to find intensity maxima.”

Page 54: The geometric distortions test is slightly flawed since skewing of the images only occurs in 4/16 cases, when $\theta \neq \varphi$ at the same time as $\lambda_1 \neq \lambda_2$.

Page 57 and 58: Figure 4 and 5 were scaled 150% in the y -dimension for visibility reasons. In Figure 4, this gives the false impression that the distorted board images are skewed.

Page 59: The following sentence:

“The method of finding interest points using corners, i.e., a high second derivative response in two directions, is a very general method.”

should read:

The method of finding interest points using corners detectors is a very general method.

Page 59: The following sentence:

“The rotationally invariant SURF method generally handled rotations worse than the Block matching method, which was unexpected.”

should read:

The Block matching method handled relatively small rotations ($\leq 15^\circ$) just as well as the rotationally invariant SURF method, which was unexpected.