Corrections to

Calabi, E., Olver, P.J., Shakiban, C., Tannenbaum, A., and Haker, S., Differential and numerically invariant signature curves applied to object recognition, *Int. J. Computer Vision* **26** (1998), 107–135.

In (2.3), the middle line: replace $d^2\kappa/ds^2$ by $d^3\kappa/ds^3$:

$$\begin{aligned}\widetilde{\kappa} = \kappa + \frac{1}{3}(b-a)\frac{d\kappa}{ds} + \frac{1}{12}(b^2 - ab + a^2)\frac{d^2\kappa}{ds^2} + \\ + \frac{1}{60}(b^3 - ab^2 + a^2b - a^3)\frac{d^3\kappa}{ds^3} + \frac{1}{120}(b-a)(3b^2 + 5ab + 3a^2)\kappa^2\frac{d\kappa}{ds} + \cdots.\end{aligned} \tag{2.3}$$

There are missing terms in the expansions in the displayed equations between (A.1) and (A.2):

$$\begin{aligned}a &= \sqrt{h^2 + u(h)^2} = -h - \tfrac{1}{8}u_2^2h^3 - \tfrac{1}{12}u_2u_3h^4 - \left(\tfrac{1}{48}u_2u_4 + \tfrac{1}{72}u_3^2 - \tfrac{1}{128}u_2^4\right)h^5 + \cdots,\\ b &= \sqrt{k^2 + u(k)^2} = k + \tfrac{1}{8}u_2^2k^3 + \tfrac{1}{12}u_2u_3k^4 + \left(\tfrac{1}{48}u_2u_4 + \tfrac{1}{72}u_3^2 - \tfrac{1}{128}u_2^4\right)k^5 + \cdots.\end{aligned}$$

and

$$\begin{aligned}h &= -a + \tfrac{1}{8}u_2^2a^3 - \tfrac{1}{12}u_2u_3a^4 + \left(\tfrac{1}{48}u_2u_4 + \tfrac{1}{72}u_3^2 - \tfrac{7}{128}u_2^4\right)a^5 + \cdots,\\ k &= b - \tfrac{1}{8}u_2^2b^3 - \tfrac{1}{12}u_2u_3b^4 - \left(\tfrac{1}{48}u_2u_4 + \tfrac{1}{72}u_3^2 - \tfrac{7}{128}u_2^4\right)b^5 - \cdots.\end{aligned}$$

There are some undisplayed third order terms in (A.2):

$$\begin{aligned}c &= \sqrt{(k-h)^2 + [u(k) - u(h)]^2}\\ &= (k-h)\left[1 + \tfrac{1}{8}u_2^2(h+k)^2 + \tfrac{1}{12}u_2u_3(h+k)(h^2 + hk + k^2) + \cdots\right]\\ &= (a+b)\left[1 - \tfrac{1}{8}\kappa^2ab + \tfrac{1}{12}\kappa\kappa_s ab(a-b)\right.\\ &\qquad\left. - \left(\tfrac{1}{48}\kappa\kappa_{ss} + \tfrac{1}{128}\kappa^4\right)ab(a^2 - ab + b^2) - \tfrac{1}{72}\kappa_s^2ab(a-b)^2 + \cdots\right].\end{aligned} \tag{A.2}$$

Divide all the right hand sides of (A.3) by 2:

$$\begin{aligned}\Delta &= \tfrac{1}{2}\left[\,hu(k) - ku(h)\,\right]\\ &= hk(h-k)\left[\tfrac{1}{4}u_2 + \tfrac{1}{12}u_3(h+k) + \tfrac{1}{48}u_4(h^2 + hk + k^2) + \cdots\right]\\ &= ab(a+b)\left[\tfrac{1}{4}\kappa + \tfrac{1}{12}\kappa_s(b-a) + \tfrac{1}{48}\kappa_{ss}(a^2 - ab + b^2) + \cdots\right].\end{aligned} \tag{A.3}$$