ERRATUM TO “KINEMATICS OF FLOWS ON CURVED, DEFORMABLE MEDIA” (Int. J. Geom. Meth. Mod. Phys. 6, 645–666 (2009))

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- (1) All calculations are done in a parallely transported, orthonormal frame basis.
- (2) The correct equations (2.10), (2.11), (2.12) in Sec. 2.2 are:

$$\dot{\sigma}_+ + (\beta + \theta) \sigma_+ - \frac{\kappa}{2} + k_+ = 0, \quad (2.10)$$

$$\dot{\sigma}_\times + (\beta + \theta) \sigma_\times + k_\times = 0, \quad (2.11)$$

$$\dot{\omega} + (\beta + \theta) \omega = 0. \quad (2.12)$$

The above corrections do not change the calculations/conclusions in Secs. 2.3, 2.4, and 2.5.

- (3) The correct equations (3.3), (3.4), (3.5), in Sec. 3.1 are:

$$\dot{\sigma}_+ + (\beta + \theta) \sigma_+ - \frac{\cos \phi}{2a(1 + a \cos \phi)} + k_+ = 0, \quad (3.3)$$

$$\dot{\sigma}_\times + (\beta + \theta) \sigma_\times + k_\times = 0, \quad (3.4)$$

$$\dot{\omega} + (\beta + \theta) \omega = 0. \quad (3.5)$$

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Fig. 8. Evolution of ESR variables for different values of a corresponding to the three geodesics shown in Fig. 7 ($l_1 = 0.3, l_2 = \frac{1}{a^2}$).

- (4) Figure 8 and its caption in the paper are replaced as given above.
- (5) The statement “All solutions exhibit a finite time singularity” (last line, p. 661) is replaced by “Solutions may or may not exhibit a finite time singularity, depending on the initial values of θ_0 and ω_0 .”
- (6) Page 663, last paragraph, first line: $\phi = d$ is replaced by $\dot{\phi} = d$.