

Erratum

Erratum to: “Mathematical modelling of stress in the hip during gait”
[Journal of Biomechanics, 32(11) (1999) 1229–1235] [☆]

M. Ipavec^a, R.A. Brand^b, D.R. Pedersen^b, B. Mavčič^a, V. Kralj-Iglič^c, A. Iglič^{a,*}

^aLaboratory of Applied Physics, Faculty of Electrical Engineering, University of Ljubljana, Ljubljana, Slovenia

^bDepartment of Orthopaedic Surgery, University of Iowa, Iowa City, USA

^cInstitute of Biophysics, Medical Faculty, University of Ljubljana, Ljubljana, Slovenia

A typing error has been found in the paper by Ipavec et al. The correct form of Eqs. (5) and (6) is the following:

$$\vartheta_R + \Theta \mp \arctan \left(\frac{\cos^2(\vartheta_{CE} - \Theta)}{\pi \mp \left(\frac{\pi}{2} - \vartheta_{CE} + \Theta - \frac{1}{2} \sin(2(\vartheta_{CE} - \Theta)) \right)} \right) = 0, \quad (5)$$

$$p_0 = \frac{3R}{2r^2} \left(\frac{\cos(\vartheta_R + \Theta)}{\pi \mp \left(\frac{\pi}{2} - \vartheta_{CE} + \Theta - \frac{1}{2} \sin(2(\vartheta_{CE} - \Theta)) \right)} \right), \quad (6)$$

instead of

$$\vartheta_R + \Theta \mp \arctan \left(\frac{\cos^2(\vartheta_{CE} - \Theta)}{\pi \pm \left(\frac{\pi}{2} - \vartheta_{CE} + \Theta - \frac{1}{2} \sin(2(\vartheta_{CE} - \Theta)) \right)} \right) = 0,$$

and

$$p_0 = \frac{3R}{2r^2} \left(\frac{\cos(\vartheta_R + \Theta)}{\pi \pm \left(\frac{\pi}{2} - \vartheta_{CE} + \Theta - \frac{1}{2} \sin(2(\vartheta_{CE} - \Theta)) \right)} \right).$$

Further, Eqs. (A.2) and (A.3) in the Appendix of Ipavec et al. (1999) which determine the boundaries of the weight bearing area can be used only for the case presented in Fig. 4A and not for all cases. This was not specified in the text. However, all the results presented in the above-mentioned article have been calculated by using the correct form of Eqs. (5) and (6) and the correct expressions for the boundaries. The authors are grateful to W. Wilson and B.v. Rietbergen from Eindhoven University of Technology for pointing to the typing error and ambiguity of Eqs. (A.2) and (A.3).

[☆]PII of original article S0021-9290(99)00119-0

*Tel.: +386-1-4250-270; fax: +386-1-4264-630.

E-mail address: ales.iglic@fe.uni-lj.si (A. Iglič).