



Correction to: A theoretical proof of the invalidity of dynamic relaxation arc-length method for snap-back problems

Pengfei Zhang^{1,2} · Chao Yang¹

Published online: 29 October 2021
© Springer-Verlag GmbH Germany, part of Springer Nature 2021

Correction to:
Computational Mechanics
<https://doi.org/10.1007/s00466-021-02071-9>

In the original publication, Eq. (17a) is incorrect. The correct equation is given here

$$(\mathbf{a}\mathbf{b})^2 - \mathbf{a}^2\mathbf{b}^2 = \beta\mathbf{a}^2(l \sin \theta)^2 \quad (17a)$$

where β is a dimensionless parameter. Accordingly, Eqs. (18), (19), (21) and (24) are corrected as

$$\gamma^{1,2} = \frac{1}{|\mathbf{a}|} \left(-\frac{\mathbf{a}}{|\mathbf{a}|} \mathbf{b} \pm l \sin \theta \sqrt{1 + \beta} \right) \quad (18)$$

$$\mathbf{u}_{t+\Delta t}^{1,2} = \mathbf{a}\gamma + \mathbf{b} = \mathbf{b} + \frac{\mathbf{a}}{|\mathbf{a}|} \left(-\frac{\mathbf{a}}{|\mathbf{a}|} \mathbf{b} \pm l \sin \theta \sqrt{1 + \beta} \right) \quad (19)$$

$$\mathbf{u}_{t+\Delta t}(i) = \pm l \sin \theta \sqrt{1 + \beta} \quad (21)$$

$$\mathbf{L} = \pm l \sin \theta \sqrt{1 + \beta} [0 \ 0 \ \dots \ 1 \ \dots \ 0 \ 0]_{2n}^T \quad (24)$$

We have confirmed that the corrections do not change the results and conclusions presented in this article, because they have no influence on the amplification matrix \mathbf{A} in Eq. (23).

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

The original article can be found online at <https://doi.org/10.1007/s00466-021-02071-9>.

✉ Pengfei Zhang
pfz@zju.edu.cn

Chao Yang
zj_yangchao@zju.edu.cn

¹ Spatial Structures Research Center, Department of Civil Engineering, Zhejiang University, Hangzhou, China

² MCC Huatian Engineering Technology Co. Ltd., Nanjing, China