PUBLISHER'S ERRATUM



## Erratum to: A note on the motion representation and configuration update in time stepping schemes for the constrained rigid body

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Published online: 27 November 2015 © Springer Science+Business Media Dordrecht 2015

## Erratum to: BIT Numer Math DOI 10.1007/s10543-015-0580-y

Due to typesetting errors, some corrections marked in the proof were not carried out.

- 1. The line after Eq. (6): The argument in  $\exp \hat{\xi}$  should be in boldface.
- 2. The second line after Eq. (8): Superscripts in the equation should not be in boldface:  $\mathbf{V}^{m} = (\boldsymbol{\omega}^{b}, \dot{\mathbf{r}}).$
- 3. The third line after (8): The vector should be in boldface:  $\boldsymbol{\omega}^{b}$ .
- 4. The fourth line after Eq. (11): The superscripts should not be in boldface:  $(\Theta_0 \omega^b, m\dot{\mathbf{r}}) \in so^*(3) \times \mathbb{R}^3$ .
- 5. The Eq. (12) should be

$$\Theta_0 \dot{\omega}^b + \omega^b \times \Theta_0 \omega^b = \mathbf{0}$$
(12)  
$$m \ddot{\mathbf{r}} = \mathbf{0}.$$

6. The Eq. (17) should be

$$\Theta_{0}\dot{\boldsymbol{\omega}}^{b} + \boldsymbol{\omega}^{b} \times \Theta_{0}\boldsymbol{\omega}^{b} = \mathbf{0}$$
(17)  
$$m\dot{\mathbf{v}}^{b} + m\boldsymbol{\omega}^{b} \times \mathbf{v}^{b} = \mathbf{0}.$$

7. The first line after Eq. (18): The equation should be  $\mathbf{J}(C) \dot{\mathbf{V}} = \eta(C, \mathbf{V})$ .

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The online version of the original article can be found under doi:10.1007/s10543-015-0580-y.

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8. The Eq. (23) should read

$$\mathbf{J}\mathbf{\dot{V}}^{b} = \mathbf{R}(\widehat{\boldsymbol{\omega}}\widehat{\boldsymbol{\omega}}\mathbf{p} + \widehat{\boldsymbol{\omega}}\mathbf{v}), \quad \text{with} \quad \mathbf{J} = (\mathbf{R}\widehat{\mathbf{p}} - \mathbf{R}).$$
(23)

9. The second line of the second paragraph in Sect. 5.3: It should be  $\mathbf{p} \times \boldsymbol{\omega}_0^{\mathrm{b}} + (0, 1, 0)$  m/s.