Errata

Dynamics of a Multibody System with Relative Translation on Curved, Flexible Tracks*

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THE following errors were made by the AIAA Editorial Department staff in the published paper:

Page 299:

On the line preceding Eq. (1), the expression ($g_n \equiv 0$) should read ($\mathring{g}_n \equiv 0$).

Page 301:

The equation preceding Eq. (6) should read

$$\mathring{g}_1 = \omega \times g_1 = (\omega_1 g_1 + \omega_2 g_2 + \omega_3 g_3) \times g_1 = \omega_3 g_2 - \omega_2 g_3$$

The second line in the second column should end with κ^3, not κ.

The line below Eq. (8) should read "here $\tau \triangleq y''' \cdot y' \times y'' / \kappa^2$ is the torsion of the curve..."

Equation (10) should be

$$\omega_p^j = \begin{cases} (\tau + \nu) y' + y' \times y'' & \text{for } j \in P(k) \\ 0, & \text{otherwise} \end{cases} \tag{10}$$

Page 302:

The line below Eq. (16) should read "Note that e is also a small quantity; and $u_1' \simeq (u')_1 \neq (u_1)'$."

The first line of the equation immediately below Eq. (18) should be

$$u(s,\zeta,t) = \sum \psi_n \eta_n + (u_2' g_3 - u_3' g_2) \times (\zeta_2 g_2 + \zeta_3 g_3)$$

where the second u in the parenthetical expression is *not* boldface.

Page 303:

The first equation on the page should read

$$\tilde{g}_i = g_i + \gamma \times g_i, \qquad i = 1,2,3$$

where the i in the final g_i is a subscript.

Equation (27) should be corrected as

$$\{\mathring{\tilde{g}}\} = [B]\{\mathring{g}\} + [\dot{B}]\{g\} \tag{27}$$

The "where" expression above Eqs. (28) should read "where $\psi_{ni}' = g_i \cdot \psi_n'$." The fourth line of text below that should be changed to "$(\tan\tilde{\alpha}/R)\dot{\tilde{s}} = (\tan\alpha/R)\dot{s} = \nu\dot{s}$ to $\tilde{\omega}_1$, we finally obtain the ..."

Equation (29) should be written as

$$\omega_p^j = \begin{cases} (\tau + \nu + \kappa u_3' + \theta')\tilde{g}_1 + (\kappa\theta - u_3'')\tilde{g}_2 \\ \quad + [\kappa(1 - u_1') + u_2'']\tilde{g}_3 \ , \text{ for } j \in P(k) \\ 0, \text{ otherwise} \end{cases}$$

$$V_p^{hj} = \begin{cases} (y' + u') + \omega_p^j \times X^{kj}, \text{ for } j \in P(k) \\ 0, \text{ otherwise} \end{cases} \tag{29}$$

$$V_p^{\eta j} = 0$$

Page 304:

There are four obvious misprints in Eqs. (34) and (35), as follows: two redundant equal signs should be omitted from the last of Eqs. (34) and the first of Eqs. (35); in the second of Eqs. (35), the superscript of V should be hj; the last line of Eqs. (35) should read "$=0$, otherwise."

In the second line from the bottom of the page, the correct expression is $\zeta = \zeta_2 g_2 + \xi_3 g_3$ (boldface g_2).

Page 305:

The equation below Eq. (37) should read as follows:

$$\begin{aligned} \dot{H}^{hk} = {} & \underline{I}^{hk} \cdot \dot{\omega} + \omega \times \underline{I}^{hk} \cdot \omega + m_k \sum_{n=1}^{NM} \{ h_n \ddot{\eta}_n \\ & + [(\underline{M}_n^T + \underline{M}_n) \cdot \dot{\omega}] \eta_n \times 2 M_n \cdot \omega \dot{\eta}_n \\ & + \omega [\underline{M}_n^T + \underline{M}_n] \cdot \omega \eta_n \} \\ & + \int [u \times \ddot{\mathring{u}} + u \times (\dot{\omega} \times u) + 2u \times (\omega \times \mathring{u}) \\ & + u \times (\omega \times (\omega \times u))] \, dm \end{aligned}$$

In the second column, the second line below the second equation should read "of the cross section. Because ρ, κ, ψ_n, g_i and Θ_n are all known..."

Page 306:

The last line of Eq. (42) should be changed to

$$+ \tfrac{1}{2}(\zeta \Sigma \Theta_i' \eta_i)^2\} / (1 - \kappa\zeta\cos\beta) \Big\} \zeta \, d\beta \, d\zeta \, ds \tag{42}$$

AIAA apologizes for the multitude of errors.

*The AIAA Editorial Department extends sincere apologies to the authors and readers for the many errors in the published paper, for which AIAA accepts full responsibility. Reprints of this Erratum are available from Peter W. Likins.