

Errata

1. page 3: Earth's rotation in Paragraph *Gyroscopes*, first clause:

Instead of line 14

'rate signal of $360^\circ/24$ hours or $0.1^\circ/s$ '

it must be

'rate signal of $360^\circ/24$ hours or $0.0042^\circ/s$ '

2. pages 21 and 22, formulas 2.26 and 2.31 in paragraph *The stress-strain relations for anisotropic materials*:

Instead of formula 2.26 on page 21

$$\bar{\sigma} = \mathbf{E} \cdot \bar{\varepsilon} + \bar{\alpha}\Delta T$$

it must be

$$\bar{\sigma} = \mathbf{E} \cdot (\bar{\varepsilon} - \bar{\alpha}\Delta T).$$

Instead of formula 2.31 on page 22

$$\bar{\varepsilon} = \mathbf{S} \cdot (\bar{\sigma} - \bar{\alpha}\Delta T)$$

it must be

$$\bar{\varepsilon} = \mathbf{S} \cdot \bar{\sigma} + \bar{\alpha}\Delta T.$$

3. page 101: Knudsen number for free molecular flow in line -8:

Instead of

$$1 \leq Kn$$

it must be

$$10 \leq Kn$$

4. page 104: Folded beam with stiff elbow in paragraph *Folded beam*

Instead of lines -2 to -6

'In many practical designs the intermediate beam is made very short and stiff, and can be neglected. If both beams have the same length, $L_1 = L_3 = L$, and identical cross-sections, the total spring rate $k_{z,FB} = \frac{3}{2}EI_z/L_3$ is eight times smaller than that of a guided beam with the same length. In order to get the same spring rate, two springs each, with length $2L$, have to be used. Nevertheless, folded beams...'

it must be

'However, in most practical designs the intermediate beam is made very short and stiff. This changes the boundary conditions of the beams at the elbow which become identical to

that of guided beams. Therefore, the total spring rate corresponds to a serial connection of two guided beams. If they are identical with length L , the spring rate $k_{z,\text{FB}} = \frac{12}{2}EI_z/L_3$ is two times smaller than that of a guided beam. Nevertheless, folded beams...

5. page 378, formula 8.48, missing index:

Instead of

$$m[\overset{\circ\circ}{r}_0 + 2\bar{\Omega} \times \overset{\circ}{r}_{0,e}] = \dots$$

it must be

$$m[\overset{\circ\circ}{r}_{0,e} + 2\bar{\Omega} \times \overset{\circ}{r}_{0,e}] = \dots$$

6. page 381, third members of the left hand side of formula 8.49 - missing x and y :

Instead of

$$\begin{aligned} m\ddot{x} + c_x\dot{x} + [k_x - m(\Omega_y^2 + \Omega_z^2)] &= \dots \quad \text{and} \\ m\ddot{y} + c_y\dot{y} + [k_y - m(\Omega_x^2 + \Omega_z^2)] &= \dots \end{aligned} \tag{1}$$

it must be

$$\begin{aligned} m\ddot{x} + c_x\dot{x} + [k_x - m(\Omega_y^2 + \Omega_z^2)]x &= \dots \quad \text{and} \\ m\ddot{y} + c_y\dot{y} + [k_y - m(\Omega_x^2 + \Omega_z^2)]y &= \dots \end{aligned}$$

7. page 395, Bandwidth in line -4:

Instead of 'Therefore, with $\Delta\omega_S = \delta_S\omega_S \dots$ '

it must be 'Therefore, with $\Delta\omega_S = 2\delta_S\omega_S \dots$ '