Errata: New developments in bridge flutter analysis

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A number of typographical errors appeared in this paper when it was published in *Proceedings of the Institution of Civil Engineers – Structures and Buildings* 165(3): 139–159, <http://dx.doi.org/10.1680/stbu.2012.165.3.139>. The Publisher would like to apologise for these errors. The corrections are set out below.

Page 141. Equations 6 and 7 were published incorrectly as:

$$6. \quad m \left[\ddot{h}(t) + (1 + ig_h) \omega_h^2 h(t) \right]$$

$$ih = L_{se}(h(t), \dot{h}(t), \alpha(t), i\alpha(t), K)$$

$$7. \quad I \left[\ddot{\alpha}(t) + (1 + ig_\alpha) \omega_\alpha^2 \alpha(t) \right]$$

$$i = M_{se}(h(t), i\dot{h}(t), \alpha(t), \dot{\alpha}(t), K)$$

The equations should have appeared as follows:

$$6. \quad m \left[\ddot{h}(t) + (1 + ig_h) \omega_h^2 h(t) \right]$$

$$= L_{se}(h(t), i\dot{h}(t), \alpha(t), i\alpha(t), K)$$

$$7. \quad I \left[\ddot{\alpha}(t) + (1 + ig_\alpha) \omega_\alpha^2 \alpha(t) \right]$$

$$= M_{se}(h(t), i\dot{h}(t), \alpha(t), i\alpha(t), K)$$

Page 142. In the final paragraph of the first column, the expression (X_c , K_c) should have read (X , K_c).

Page 143. The sentence beginning at the foot of the second column should have appeared as follows:

An important feature of the model is that the present equation for the critical reduced frequency of oscillation does account for the contribution of structural damping.

Page 148. Equation 21 was published incorrectly as:

$$21. \quad g_\alpha - \frac{A_2^*}{r_{\alpha\mu}^2} = 0$$

The equation should have appeared as follows:

$$21. \quad g_\alpha - \frac{\overline{A_2^*}}{r_{\alpha\mu}^2} = 0$$

Page 150. In the first paragraph of the first column, a section of text was omitted. The text is incorporated below:

However, the reduced critical wind speed might be more sensitive to variations of the mass moment of inertia in the case of large values of the structural damping in torsion, as shown by Equation 21. The discussion is more complicated for the dimensional wind speed, which depends also on the flutter frequency. For instance, an increase of the non-dimensional mass moment of inertia, $r_{\alpha\mu}^2$, is able to reduce the frequency parameter X (Equation 14) and, therefore, to increase the frequency of the unstable mode. Nevertheless, at the same time it may imply a decrease of the still-air torsional frequency, with opposite effect on the flutter wind speed. In fact the discussed parameters are generally related (for instance, the frequency ratio depends on the ratio of the mass moment of inertia to the mass of the deck) and it is not possible to change them in a completely independent way. A detailed discussion of the effects of different structural dynamic parameters on the flutter instability mechanism can be found in Mannini and Bartoli (2008b).

Page 150. In the final paragraph of the first column, the sentence starting on line 13 should have appeared as follows:

Also, a diminution of the non-dimensional mass moment of inertia, $r_{\alpha\mu}^2$, has a similar effect.

Page 150. At the end of the first column, 'Rio Gramá' should read 'Rio Guamá'.

Page 151. The Figure 9 caption should appear as follows:

Figure 9. Comparison of flutter derivatives for a thin flat plate (Fung, 1993; Theodorsen, 1934) and a 12.5:1 rectangular cylinder (Matsumoto, 1996)

Page 158. An error appeared in the Mannini *et al.* (2010a) reference. It appears correctly here:

Mannini C, Ferrucci M and Bartoli G (2010a) Effetti non lineari nelle derivate di flutter di un impalcato da ponte. *Proceedings of 11th Italian National Conference on Wind Engineering, Spoleto, Morlacchi, Perugia* (in Italian).