# Matrix Methods in the Design Analysis of Mechanisms and Multibody Systems

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# Corrigenda

**Latest update: 10 June 2013**

## Page  Correction

47     Line 23, Eq. (3.14). In the top-left corner of the matrix to the right of the equality sign, the symbol $\hat{\Omega}$ which now shows with an arc over it should also show a tilde above the arc as follows $\hat{\tilde{\Omega}}$ .

62     Figure 3.13. All of the vectors (but not scalars) in this figure should be set in bold typefont (10 places).
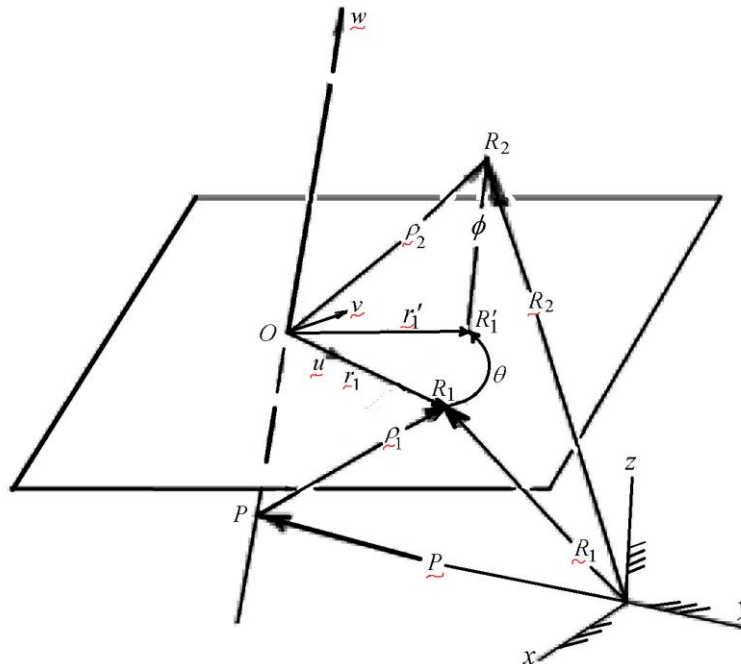
63       Lines 16-22. The symbol $\rho$ should be italic and bold so that the four equations read

$$\boldsymbol{\rho}_1 = \boldsymbol{R}_1 - \boldsymbol{P}. \tag{a}$$

and

$$\boldsymbol{R}_2 = \boldsymbol{P} + \overrightarrow{PO} + \boldsymbol{\rho}_2. \tag{b}$$

and

$$\boldsymbol{\rho}_2 = r_1 \cos\theta \boldsymbol{u} + r_1 \sin\theta \boldsymbol{v} + \phi \boldsymbol{w}.$$

and

$$\overrightarrow{PO} = (\boldsymbol{\rho}_1 \cdot \boldsymbol{w})\boldsymbol{w},$$

74       Line 21, Eq. (3.56). The symbol $\tilde{\hat{\Omega}}$ in the top-left corner of the first matrix should be italic, but not bold.

78       Line 1, Problem 3.13. Both symbols $\hat{\Omega}$ and $\Omega$ in the top row of the left-most matrix should be italic, but not bold. In addition, in the top-left corner of both matrices, both symbols $\hat{\Omega}$ and $\hat{\sigma}$, which are now properly italic with arcs above them, should each have tilde marks above the arcs, that is $\tilde{\hat{\Omega}}$ and $\tilde{\hat{\sigma}}$.

78       Line 7, Problem 3.15. The data which now reads " $\angle(x_b, y_c) = 45°.$ " should read " $\angle(y_b, x_c) = 45°.$ "

105      Line 2. The beginning of the second line now reads "$(\phi_h^1)$" and should read "$v(\phi_h^1)$".

113      Figure 5.2. The lower of the two symbols $w_h'$ should not have a prime.
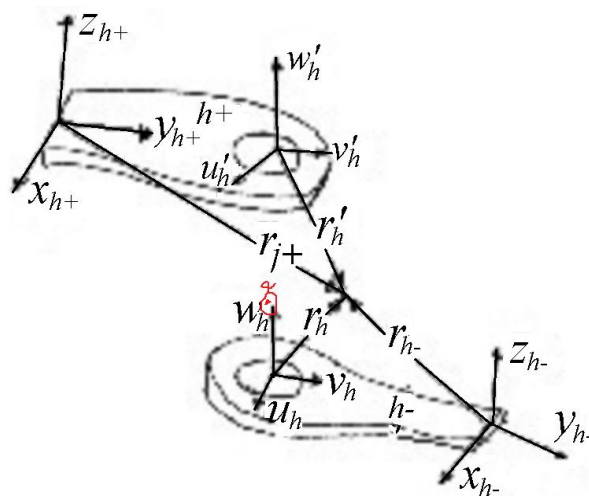


229      Line 9. The reference which now reads "[4]" should read "[5]".

237     Lines 27-31. The symbol $\tau$ on line 27, and in $\tau_t$ on line 28 and $\tau_n$ on line 29, the $\tau$ should be in boldface type, ($\boldsymbol{\tau}$, $\boldsymbol{\tau_t}$, $\boldsymbol{\tau_n}$). The same is true for three places withing the caption for Figure 9.2, and for four places within Figure 9.2 itself.

245     Line 1. The name Maupertuis' as now printed is misspelled.

246     Line 24. In the last line of the last equation on the page, a factor of $\frac{1}{2}$ should appear immediately inside of the left brace, before the summation over $b$. Thus, the last line on the page should read:

$$-\frac{\partial}{\partial \psi_i}\left\{\frac{1}{2}\sum_{b=1}^{\ell}\mathsf{trace}\left[\left(\sum_{j=1}^{f}W_{bj}\dot{\psi}_j\right)T_{0b}J_bT_{0b}^t\left(\sum_{k=1}^{f}W_{bk}\dot{\psi}_k\right)^t\right]\right\},$$

253     Line 18. Reference 8. The name P. L. M. de Maupertuis as now printed is misspelled.

257     Line 7. The symbol which now reads "$\boldsymbol{t}^*$" should read "$t^*$".

260     Line 11. The symbol "$\tau'_{cdeg}(\boldsymbol{\phi}^*,\boldsymbol{t}^*)$" should read "$\tau'_{cdeg}(\boldsymbol{\phi}^*,\boldsymbol{t})$".

287     Line 13. The embedded equation which now reads "$[\dot{\mathcal{T}}_k(0)] = 0$." should read "$[\dot{\mathcal{T}}_k(0)] = 0$."