

## Known Typographical Errors in the Third Edition, First Printing of Turbulence Modeling for CFD by D. C. Wilcox

**These are all of the known typographical errors as of August 11, 2008.**

1. Page 160, second of Equations (4.126): Replace “ $\alpha(\partial U/\partial y)^2$ ” with “ $\alpha(\omega/k)\nu_T(\partial U/\partial y)^2$ ”.  
The correct equation is

$$0 = \alpha \frac{\omega}{k} \nu_T \left( \frac{\partial U}{\partial y} \right)^2 - \beta_o \omega^2 + \frac{\sigma_d}{\omega} \frac{\partial k}{\partial y} \frac{\partial \omega}{\partial y} + \sigma \frac{\partial}{\partial y} \left[ \frac{k}{\omega} \frac{\partial \omega}{\partial y} \right]$$

2. Page 176, third of Equations (4.184): Replace “ $\alpha(\partial U/\partial y)^2$ ” with “ $\alpha(\omega/k)\nu_T(\partial U/\partial y)^2$ ”.  
The correct equation is

$$\frac{d}{dy} \left[ \left( \nu + \sigma \frac{k}{\omega} \right) \frac{d\omega}{dy} \right] + \alpha \frac{\omega}{k} \nu_T \left( \frac{dU}{dy} \right)^2 + \frac{\sigma_d}{\omega} \frac{dk}{dy} \frac{d\omega}{dy} - \beta_o \omega^2 = 0$$

3. Page 255, Equation (5.75): Add an overbar to density in the production term. The correct term is

$$\alpha \frac{\omega}{k} \bar{\rho} \tau_{ij} \frac{\partial \tilde{u}_i}{\partial x_j}$$

4. Page 281, Equation (5.131): In the central term,  $\partial \tilde{u}/\partial y$  should be squared. The correct term is

$$\frac{(\bar{\rho}k/\omega) (\partial \tilde{u}/\partial y)^2}{\beta^* \bar{\rho}k\omega}$$

5. Page 306, Figure 6.2: The curves are misidentified. The solid curve corresponds to the computation with the curvature correction and the dashed curve to the computation without the curvature correction.

6. Page 485, Driver-Seegmiller reference, last line: Replace “No. 1” with “No. 2”.

7. Page 489, line 2: Replace “AIAA Paper 78-1168” with “AIAA Paper 78-1169”.

8. Page 499: The “Schlichting and Gersten (2000)” reference is missing. The reference is Schlichting, H. and Gersten, K. (2000), *Boundary Layer Theory*, Eighth Ed., Springer-Verlag, Berlin, Germany.