Errata for Second Printing of
“Random Heterogeneous Materials: Microstructure and Macroscopic Properties”
by S. Torquato (Springer-Verlag, New York, 2002)

Updated on January 12, 2010

- Page 33: two lines above Eq. (2.19): “... for all \( i \) and \( j \) are statistically independent ...” should be replaced by “... for all \( j \) and \( k \) are statistically independent ...”

- Page 47: \( \ell_C \) in Eq. (2.71) and Eq. (2.73) should be \( \ell^{(i)}_C \).

- Page 82: The entire expression within the brackets of Eq. (3.61) should be multiplied by \( D^3 \).

- Page 124: The plus signs in the third, fourth and fifth terms of Eq. (5.12) should all be minus signs.

- Page 164: In the exponent of Eq. (6.16), replace \((1 - 2d)\) with \((1 - d)\).

- Page 317: Both minus signs in the integral between Eqs. (13.38) and (13.39) should be plus signs.

- Page 347: The right side of Eq. (13.175) is missing a minus sign, i.e., it should read
  
  \[
  p_1(x, y; \omega) = -\nabla p_0(x) \cdot \pi(y; \omega)
  \]

- Page 371: in the first line of (14.79), the last term \( \langle u(\nabla \cdot \tau) \rangle \) should be \( \langle u \cdot (\nabla \cdot \tau) \rangle \).

- Page 395: in Eq. (15.25), \( \sigma_0 = \lim_{\lambda \to \infty} \hat{\sigma}_\lambda \) should be \( \sigma_0 = \lim_{\lambda \to \infty} \frac{\hat{\sigma}_\lambda}{\lambda} \).

- Page 416: in Eq. (16.31), the multiplicative factor \( \phi_i \) should be removed and replaced with unity.

- Page 421: in Eq. (16.54), \( \varepsilon_{12}(x_{12}) \) should be \( \varepsilon_{12}(x_1) \).

- Page 423: the second equation should read \((E_e)_{22} = (E_e)_{33} = (C_e)_{22} + \ldots\). The plus sign was incorrectly indicated as a minus sign.

- Page 430: in Eqs. (16.74) and (16.75), each multiplicative factor \( \phi_i \) should be removed and replaced with unity.

- Page 430: two lines below Eq. (16.75), replace (14.82) with (14.86).

- Page 441: In Eq. (17.25), the factor \( \left( \prod_{j=1}^{d} \frac{a_j}{2} \right) \) multiplying the integral should be \( \frac{1}{2} \left( \prod_{j=1}^{d} a_j \right) \).

- Page 451, Table 17.1: The second term in the sum of the coefficient \( T_s \) for needles should read
  
  \[
  \frac{2(G_1 + E_1)}{G_2 + E_1}
  \]
• Page 498: the second term on the right-hand side of Eq. (19.67) should be multiplied by $K_1$.

• Page 498: the second term on the right-hand side of Eq. (19.68) should be multiplied by $G_1$.

• Page 531: in Eq. (20.90), $C_q]\varepsilon(x)$ should be $C_q\varepsilon(x)$.

• Page 543: directly below Eq. (20.158), $\zeta_2$ should be $\zeta_p$.

• Page 546: in Eq. (20.177), $(K_p - K_q)^2$ and $(G_p - G_q)^2$ should be $(K_p - K_q)^3$ and $(G_p - G_q)^3$, respectively.

• Page 574: line 4: the reference to Eq. (21.61) should be to the equation immediately before (21.61) on page 567, which has no number.