Erratum

Erratum to “Fundamental Solution in the Theory of Thermomicrostretch Elastic Diffusive Solids”

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Authors have come across some typographic mistakes in their original paper. Equations (2.1), (2.3), (2.6), (2.9), (3.1), (3.3)–(3.5), (3.7), (3.9), (3.11), (3.13), (3.14), (3.17)–(3.19), (3.22), and (3.35) may be read as

$$\begin{aligned}
 (\mu + K^*)\Delta \bar{\mathbf{u}} + (\lambda + \mu)\text{grad div } \bar{\mathbf{u}} + K^*\text{curl } \bar{\boldsymbol{\varphi}} + \chi^*\text{grad } \bar{\boldsymbol{\varphi}}^* - \beta_1\text{grad } \bar{T} - \beta_2\text{grad } \bar{C} &= \rho \ddot{\bar{\mathbf{u}}}, \\
 (f^*\Delta - 2K^*)\bar{\boldsymbol{\varphi}} + (\alpha^* + \beta^*)\text{grad div } \bar{\boldsymbol{\varphi}} + K^*\text{curl } \bar{\mathbf{u}} &= \rho j \ddot{\bar{\boldsymbol{\varphi}}}, \\
 (b^*\Delta - c^*)\bar{\boldsymbol{\varphi}}^* - \chi^*\text{div } \bar{\mathbf{u}} + g^*\bar{T} + h^*\bar{C} &= \rho \zeta \ddot{\bar{\boldsymbol{\varphi}}}, \\
 \left(1 + \tau_0 \frac{\partial}{\partial t}\right) \left(\beta_1 T_0 \text{div } \dot{\bar{\mathbf{u}}} + g^* T_0 \dot{\bar{\boldsymbol{\varphi}}}^* + \rho C_E \dot{\bar{T}} + a T_0 \dot{\bar{C}}\right) &= K \Delta \bar{T}, \\
 D\beta_2 \Delta \text{div } \bar{\mathbf{u}} + Dh^* \Delta \bar{\boldsymbol{\varphi}}^* + Da \Delta \bar{T} - Db \Delta \bar{C} + \dot{\bar{C}} + \tau^0 \ddot{\bar{C}} &= 0.
 \end{aligned} \tag{2.1}$$

$$\begin{aligned}
 \delta_1 \Delta \bar{\mathbf{u}} + \delta_2 \text{grad div } \bar{\mathbf{u}} + \delta_3 \text{curl } \bar{\boldsymbol{\varphi}} + \delta_4 \text{grad } \bar{\boldsymbol{\varphi}}^* - \text{grad } \bar{T} - \text{grad } \bar{C} &= \ddot{\bar{\mathbf{u}}}, \\
 (\delta_5 \Delta - 2\delta_3)\bar{\boldsymbol{\varphi}} + \delta_6 \text{grad div } \bar{\boldsymbol{\varphi}} + \delta_3 \text{curl } \bar{\mathbf{u}} &= \delta_7 \ddot{\bar{\boldsymbol{\varphi}}}, \\
 (\delta_8 \Delta - \delta_9)\bar{\boldsymbol{\varphi}}^* - \delta_{10} \text{div } \bar{\mathbf{u}} + \delta_{11} \bar{T} + \delta_{12} \bar{C} &= \ddot{\bar{\boldsymbol{\varphi}}}, \\
 \tau_t^0 \left(\zeta_2 \text{div } \dot{\bar{\mathbf{u}}} + \zeta_3 \dot{\bar{\boldsymbol{\varphi}}}^* + \dot{\bar{T}} + \zeta_1 \dot{\bar{C}}\right) &= \Delta \bar{T}, \\
 q_1^* \Delta \text{div } \bar{\mathbf{u}} + q_4^* \Delta \bar{\boldsymbol{\varphi}}^* + q_2^* \Delta \bar{T} - q_3^* \Delta \bar{C} + \tau_c^0 \dot{\bar{C}} &= 0.
 \end{aligned} \tag{2.3}$$

$$\begin{aligned}
& (\delta_1 \Delta + \omega^2) \mathbf{u} + \delta_2 \operatorname{grad} \operatorname{div} \mathbf{u} + \delta_3 \operatorname{curl} \boldsymbol{\varphi} + \delta_4 \operatorname{grad} \varphi^* - \operatorname{grad} T - \operatorname{grad} C = \mathbf{0}, \\
& (\delta_5 \Delta + \mu^*) \boldsymbol{\varphi} + \delta_6 \operatorname{grad} \operatorname{div} \boldsymbol{\varphi} + \delta_3 \operatorname{curl} \mathbf{u} = \mathbf{0}, \\
& -\delta_{10} \operatorname{div} \mathbf{u} + (\delta_8 \Delta + \zeta^*) \varphi^* + \delta_{11} T + \delta_{12} C = 0, \\
& -\tau_t^{10} [\zeta_2 \operatorname{div} \mathbf{u} + \zeta_3 \varphi^* + \zeta_1 C] + (\Delta - \tau_t^{10}) T = 0, \\
& q_1^* \Delta \operatorname{div} \mathbf{u} + q_4^* \Delta \varphi^* + q_2^* \Delta T - q_3^* \Delta C + \tau_c^{10} C = 0.
\end{aligned} \tag{2.6}$$

$$\begin{aligned}
F_{mn}(\mathbf{D}_x) &= [\delta_1 \Delta + \omega^2] \delta_{mn} + \delta_2 \frac{\partial^2}{\partial x_m \partial x_n}, & F_{m,n+3}(\mathbf{D}_x) &= F_{m+3,n}(\mathbf{D}_x) = \delta_3 \sum_{r=1}^3 \varepsilon_{mrn} \frac{\partial}{\partial x_r}, \\
F_{m7}(\mathbf{D}_x) &= \delta_4 \frac{\partial}{\partial x_m}, & F_{m8}(\mathbf{D}_x) &= F_{m9}(\mathbf{D}_x) = \frac{-\partial}{\partial x_m}, \\
F_{m+3,n+3}(\mathbf{D}_x) &= (\delta_5 \Delta + \mu^*) \delta_{mn} + \delta_6 \frac{\partial^2}{\partial x_m \partial x_n}, \\
F_{m+3,7}(\mathbf{D}_x) &= F_{7,n+3}(\mathbf{D}_x) = F_{m+3,8}(\mathbf{D}_x) = F_{8,n+3}(\mathbf{D}_x) = F_{m+3,9}(\mathbf{D}_x) = F_{9,n+3}(\mathbf{D}_x) = 0, \\
F_{7n}(\mathbf{D}_x) &= -\delta_{10} \frac{\partial}{\partial x_n}, & F_{77}(\mathbf{D}_x) &= \delta_8 \Delta + \zeta^*, & F_{78}(\mathbf{D}_x) &= \delta_{11}, & F_{79}(\mathbf{D}_x) &= \delta_{12}, \\
F_{8n}(\mathbf{D}_x) &= -\zeta_2 \tau_t^{10} \frac{\partial}{\partial x_n}, & F_{87}(\mathbf{D}_x) &= -\zeta_3 \tau_t^{10}, & F_{88}(\mathbf{D}_x) &= \Delta - \tau_t^{10}, \\
F_{89}(\mathbf{D}_x) &= -\zeta_1 \tau_t^{10}, & F_{9n}(\mathbf{D}_x) &= q_1^* \Delta \frac{\partial}{\partial x_n}, & F_{97}(\mathbf{D}_x) &= q_4^* \Delta, & F_{98}(\mathbf{D}_x) &= q_2^* \Delta, \\
F_{99}(\mathbf{D}_x) &= -q_3^* \Delta + \tau_c^{10}, & m, n &= 1, 2, 3.
\end{aligned} \tag{2.9}$$

$$\delta_1 \Delta \mathbf{u} + \delta_2 \operatorname{grad} \operatorname{div} \mathbf{u} + \delta_3 \operatorname{curl} \boldsymbol{\varphi} - \delta_{10} \operatorname{grad} \varphi^* - \zeta_2 \tau_t^{10} \operatorname{grad} T + q_1^* \Delta \operatorname{grad} C + \omega^2 \mathbf{u} = \mathbf{H}'. \tag{3.1}$$

$$\delta_4 \operatorname{div} \mathbf{u} + (\delta_8 \Delta + \zeta^*) \varphi^* - \zeta_3 \tau_t^{10} T + q_4^* \Delta C = Z. \tag{3.3}$$

$$-\operatorname{div} \mathbf{u} + \delta_{11} \varphi^* + (\Delta - \tau_t^{10}) T + q_2^* \Delta C = L. \tag{3.4}$$

$$-\operatorname{div} \mathbf{u} + \delta_{12} \varphi^* - \zeta_1 \tau_t^{10} T - q_3^* \Delta C + \tau_c^{10} C = M. \tag{3.5}$$

$$\begin{aligned}
& (\Delta + \omega^2) \operatorname{div} \mathbf{u} - \delta_{10} \Delta \varphi^* - \zeta_2 \tau_t^{10} \Delta T + q_1^* \Delta^2 C = \operatorname{div} \mathbf{H}', \\
& (v^* \Delta + \mu^*) \operatorname{div} \boldsymbol{\varphi} = \operatorname{div} \mathbf{H}'', \\
& \delta_4 \operatorname{div} \mathbf{u} + (\delta_8 \Delta + \zeta^*) \varphi^* - \zeta_3 \tau_t^{10} T + q_4^* \Delta C = Z, \\
& -\operatorname{div} \mathbf{u} + \delta_{11} \varphi^* + (\Delta - \tau_t^{10}) T + q_2^* \Delta C = L, \\
& -\operatorname{div} \mathbf{u} + \delta_{12} \varphi^* - \zeta_1 \tau_t^{10} T - q_3^* \Delta C + \tau_c^{10} C = M.
\end{aligned} \tag{3.7}$$

$$N(\Delta) = \|N_{mn}(\Delta)\|_{4 \times 4} = \left\| \begin{array}{cccc} \Delta + \omega^2 & -\delta_{10} \Delta & -\zeta_2 \tau_t^{10} \Delta & q_1^* \Delta^2 \\ \delta_4 & \delta_8 \Delta + \zeta^* & -\zeta_3 \tau_t^{10} & q_4^* \Delta \\ -1 & \delta_{11} & \Delta - \tau_t^{10} & q_2^* \Delta \\ -1 & \delta_{12} & -\zeta_1 \tau_t^{10} & -q_3^* \Delta + \tau_c^{10} \end{array} \right\|_{4 \times 4}. \tag{3.9}$$

$$\boldsymbol{\Psi} = (\Psi_1, \Psi_2, \Psi_3, \Psi_4), \quad \Psi_n = e^* \sum_{m=1}^4 N_{mn}^* d_m, \tag{3.11}$$

$$\Gamma_1(\Delta) = e^* \det \mathbf{N}(\Delta), \quad e^* = -\frac{1}{q_3^* \delta_8}, \quad n = 1, 2, 3, 4.$$

$$(\Delta + \lambda_7^2) \operatorname{div} \boldsymbol{\varphi} = \frac{1}{v^*} \operatorname{div} \mathbf{H}''. \tag{3.13}$$

$$(\delta_5 \Delta + \mu^*) \left[\delta_1 \Delta \mathbf{u} + \delta_2 \operatorname{grad} \operatorname{div} \mathbf{u} + \omega^2 \mathbf{u} \right] + \delta_3 (\delta_5 \Delta + \mu^*) \operatorname{curl} \boldsymbol{\varphi} \tag{3.14}$$

$$= (\delta_5 \Delta + \mu^*) \left[\mathbf{H}' + \delta_{10} \operatorname{grad} \varphi^* + \zeta_2 \tau_t^{10} \operatorname{grad} T - q_1^* \Delta \operatorname{grad} C \right].$$

$$(\delta_5 \Delta + \mu^*) \left[\delta_1 \Delta \mathbf{u} + \delta_2 \operatorname{grad} \operatorname{div} \mathbf{u} + \omega^2 \mathbf{u} \right] + \delta_3^2 \Delta \mathbf{u} - \delta_3^2 \operatorname{grad} \operatorname{div} \mathbf{u} \tag{3.17}$$

$$= (\delta_5 \Delta + \mu^*) \left[\mathbf{H}' + \delta_{10} \operatorname{grad} \varphi^* + \zeta_2 \tau_t^{10} \operatorname{grad} T - q_1^* \Delta \operatorname{grad} C \right] - \delta_3 \operatorname{curl} \mathbf{H}''.$$

$$\left\{ \left[(\delta_5 \Delta + \mu^*) \delta_1 + \delta_3^2 \right] \Delta + (\delta_5 \Delta + \mu^*) \omega^2 \right\} \tag{3.18}$$

$$= - \left[\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2 \right] \operatorname{grad} \operatorname{div} \mathbf{u} + (\delta_5 \Delta + \mu^*)$$

$$\times \left[\mathbf{H}' + \delta_{10} \operatorname{grad} \varphi^* + \zeta_2 \tau_t^{10} \operatorname{grad} T - q_1^* \Delta \operatorname{grad} C \right] - \delta_3 \operatorname{curl} \mathbf{H}''.$$

$$\begin{aligned}
& \Gamma_1(\Delta) \left[\delta_5 \delta_1 \Delta^2 + (\mu^* \delta_1 + \delta_5 \omega^2 + \delta_3^2) \Delta + \mu^* \omega^2 \right] \mathbf{u} \\
&= - \left[\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2 \right] \text{grad } \Psi_1 + (\delta_5 \Delta + \mu^*) \\
&\quad \times \left[\Gamma_1(\Delta) \mathbf{H}' + \delta_{10} \text{grad } \Psi_2 + \zeta_2 \tau_t^{10} \text{grad } \Psi_3 - q_1^* \Delta \text{grad } \Psi_4 \right] - \delta_3 \Gamma_1(\Delta) \text{curl } \mathbf{H}''.
\end{aligned} \tag{3.19}$$

$$\begin{aligned}
\Psi' &= f^* \left\{ - \left[\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2 \right] \text{grad } \Psi_1 + (\delta_5 \Delta + \mu^*) \right. \\
&\quad \times \left[\Gamma_1(\Delta) \mathbf{H}' + \delta_{10} \text{grad } \Psi_2 + \zeta_2 \tau_t^{10} \text{grad } \Psi_3 - q_1^* \Delta \text{grad } \Psi_4 \right] - \delta_3 \Gamma_1(\Delta) \text{curl } \mathbf{H}'' \left. \right\}.
\end{aligned} \tag{3.22}$$

$$\begin{aligned}
q_{11}(\Delta) &= f^* e^* \left\{ (\delta_5 \Delta + \mu^*) \left[\delta_{10} N_{12}^* + \zeta_2 \tau_t^{10} N_{13}^* - q_1^* \Delta N_{14}^* \right] - (\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2) N_{11}^* \right\}, \\
q_{21}(\Delta) &= -f^* \delta_3 \Gamma_1(\Delta), \quad q_{12}(\Delta) = -f^* \delta_3 (\Delta + \lambda_7^2), \quad q_{22}(\Delta) = -\frac{f^*}{v^*} \left[\delta_6 (\delta_1 \Delta + \omega^2) - \delta_3^2 \right], \\
q_{31}(\Delta) &= f^* e^* \left\{ (\delta_5 \Delta + \mu^*) \left[\delta_{10} N_{22}^* + \zeta_2 \tau_t^{10} N_{23}^* - q_1^* \Delta N_{24}^* \right] - (\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2) N_{21}^* \right\}, \\
q_{41}(\Delta) &= f^* e^* \left\{ (\delta_5 \Delta + \mu^*) \left[\delta_{10} N_{32}^* + \zeta_2 \tau_t^{10} N_{33}^* - q_1^* \Delta N_{34}^* \right] - (\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2) N_{31}^* \right\}, \\
q_{51}(\Delta) &= f^* e^* \left\{ (\delta_5 \Delta + \mu^*) \left[\delta_{10} N_{42}^* + \zeta_2 \tau_t^{10} N_{43}^* - q_1^* \Delta N_{44}^* \right] - (\delta_2 (\delta_5 \Delta + \mu^*) - \delta_3^2) N_{41}^* \right\}, \\
q_{13}(\Delta) &= e^* N_{12}^*, \quad q_{14}(\Delta) = e^* N_{13}^*, \quad q_{15}(\Delta) = e^* N_{14}^*, \\
q_{33}(\Delta) &= e^* N_{22}^*, \quad q_{34}(\Delta) = e^* N_{23}^*, \quad q_{35}(\Delta) = e^* N_{24}^*, \\
q_{43}(\Delta) &= e^* N_{32}^*, \quad q_{44}(\Delta) = e^* N_{33}^*, \quad q_{45}(\Delta) = e^* N_{34}^*, \\
q_{53}(\Delta) &= e^* N_{42}^*, \quad q_{54}(\Delta) = e^* N_{43}^*, \quad q_{55}(\Delta) = e^* N_{44}^*.
\end{aligned} \tag{3.35}$$

The above errors do not affect the analytic results of the paper. Inconvenience caused is regretted.