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Corrigendum

Corrigendum to "A hyperbolic microscopic model and its numerical scheme for thermal analysis in an N-carrier system" [Int. J. Heat Mass Transfer 52 (2009) 2379–2389]

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The author regrets that error occurred in Eqs. (7a), (8a), (9a), (21a), (22a), (23a), (34a), (35a), and (36a). These equations are reproduced correctly below and overleaf. The author apologies for any inconvenience.

$$C_1\frac{\partial T_1(\vec{x},t)}{\partial t} = -\nabla\cdot\vec{q}_1 - \sum_{i=2}^{N} G_{1i}[T_1(\vec{x},t) - T_i(\vec{x},t)] + Q_1(\vec{x},t), \tag{7a}$$

$$C_j\frac{\partial T_j(\vec{x},t)}{\partial t} = -\nabla\cdot\vec{q}_j + \sum_{i=1}^{j-1} G_{ij}[T_i(\vec{x},t) - T_j(\vec{x},t)] - \sum_{i=j+1}^{N} G_{ji}[T_j(\vec{x},t) - T_i(\vec{x},t)] + Q_j(\vec{x},t), \tag{8a}$$

$$C_N\frac{\partial T_N(\vec{x},t)}{\partial t} = -\nabla\cdot\vec{q}_N + \sum_{i=1}^{N-1} G_{iN}[T_i(\vec{x},t) - T_N(\vec{x},t)] + Q_N(\vec{x},t), \tag{9a}$$

$$C_1\frac{(T_1)_m^{n+1}-(T_1)_m^n}{\Delta t} = -\nabla_x\left[\frac{(q_1)_m^{n+1}+(q_1)_m^n}{2}\right] - \sum_{i=2}^{N} G_{1i}\left[\frac{(T_1)_m^{n+1}+(T_1)_m^n}{2} - \frac{(T_i)_m^{n+1}+(T_i)_m^n}{2}\right] + (Q_1)_m^{n+\frac{1}{2}}, \tag{21a}$$

$$C_j\frac{(T_j)_m^{n+1}-(T_j)_m^n}{\Delta t} = -\nabla_x\left[\frac{(q_j)_m^{n+1}+(q_j)_m^n}{2}\right] + \sum_{i=1}^{j-1} G_{ij}\left[\frac{(T_i)_m^{n+1}+(T_i)_m^n}{2} - \frac{(T_j)_m^{n+1}+(T_j)_m^n}{2}\right] - \sum_{i=j+1}^{N} G_{ji}\left[\frac{(T_j)_m^{n+1}+(T_j)_m^n}{2} - \frac{(T_i)_m^{n+1}+(T_i)_m^n}{2}\right] + (Q_j)_m^{n+\frac{1}{2}}, \tag{22a}$$

$$C_N\frac{(T_N)_m^{n+1}-(T_N)_m^n}{\Delta t} = -\nabla_x\left[\frac{(q_N)_m^{n+1}+(q_N)_m^n}{2}\right] + \sum_{i=1}^{N-1} G_{iN}\left[\frac{(T_i)_m^{n+1}+(T_i)_m^n}{2} - \frac{(T_N)_m^{n+1}+(T_N)_m^n}{2}\right] + (Q_N)_m^{n+\frac{1}{2}}, \tag{23a}$$

$$C_1\frac{(E_1)_m^{n+1}-(E_1)_m^n}{\Delta t} = -\nabla_x\left[\frac{(\theta_1)_m^{n+1}+(\theta_1)_m^n}{2}\right] - \sum_{i=2}^{N} G_{1i}\left[\frac{(E_1)_m^{n+1}+(E_1)_m^n}{2} - \frac{(E_i)_m^{n+1}+(E_i)_m^n}{2}\right] + (\varepsilon_1)_m^{n+\frac{1}{2}}, \tag{34a}$$

$$C_j\frac{(E_j)_m^{n+1}-(E_j)_m^n}{\Delta t} = -\nabla_x\left[\frac{(\theta_j)_m^{n+1}+(\theta_j)_m^n}{2}\right] + \sum_{i=1}^{j-1} G_{ij}\left[\frac{(E_i)_m^{n+1}+(E_i)_m^n}{2} - \frac{(E_j)_m^{n+1}+(E_j)_m^n}{2}\right] - \sum_{i=j+1}^{N} G_{ji}\left[\frac{(E_j)_m^{n+1}+(T_j)_m^n}{2} - \frac{(E_i)_m^{n+1}+(E_i)_m^n}{2}\right] + (\varepsilon_j)_m^{n+\frac{1}{2}}, \tag{35a}$$

$$C_N\frac{(E_N)_m^{n+1}-(E_N)_m^n}{\Delta t} = -\nabla_x\left[\frac{(\theta_N)_m^{n+1}+(\theta_N)_m^n}{2}\right] + \sum_{i=1}^{N-1} G_{iN}\left[\frac{(E_i)_m^{n+1}+(E_i)_m^n}{2} - \frac{(E_N)_m^{n+1}+(E_N)_m^n}{2}\right] + (\varepsilon_N)_m^{n+\frac{1}{2}}, \tag{36a}$$

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