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There are typos in four of the equations in the original paper "Concurrent atomistic-continuum modeling of crystalline materials"[1] [J. Appl. Phys. **126**, 101101 (2019)]. These errors do not affect the final equations and the conclusions of the paper. We regret these errors and provide the correct equations as follows:

$$\delta_{V\alpha}(\mathbf{y}-\Delta\mathbf{r}_{k\xi}) \equiv \begin{cases} 1 & \text{if} \quad \mathbf{y}-\Delta\mathbf{r}_{k\xi} \in V_\alpha \quad \text{or} \quad \xi=\alpha, \\ 0 & \text{if} \quad \mathbf{y}-\Delta\mathbf{r}_{k\xi} \notin V_\alpha \quad \text{or} \quad \xi\neq\alpha. \end{cases} \tag{9}$$

In the original Eq. (9), we had the box function $\delta_{V\alpha}(\mathbf{y}-\Delta\mathbf{r}_{k\xi})=1$ for $\xi\neq\alpha$,

$$\begin{aligned}\frac{\partial(\rho_\alpha \mathbf{v}_\alpha)}{\partial t} &= \sum_{k=1}^{N_l}\sum_{\xi=1}^{N_a} m_\xi \dot{\mathbf{v}}_{k\xi}\bar{\delta}_V(\mathbf{x}-\mathbf{r}_k)\bar{\delta}_{V\alpha}(\mathbf{y}-\Delta\mathbf{r}_{k\xi}) + \sum_{k=1}^{N_l}\sum_{\xi=1}^{N_a} m_\xi \mathbf{v}_{k\xi}\frac{\partial}{\partial t}\bar{\delta}_V(\mathbf{x}-\mathbf{r}_k)\bar{\delta}_{V\alpha}(\mathbf{y}-\Delta\mathbf{r}_{k\xi}) + \sum_{k=1}^{N_l}\sum_{\xi=1}^{N_a} m_\xi \mathbf{v}_{k\xi}\bar{\delta}_V(\mathbf{x}-\mathbf{r}_k)\frac{\partial}{\partial t}\bar{\delta}_{V\alpha}(\mathbf{y}-\Delta\mathbf{r}_{k\xi}) \\ &= \frac{1}{V}\oiint_{\partial V}(\mathbf{t}_\alpha-\rho_\alpha\mathbf{v}_\alpha\mathbf{v}\cdot\mathbf{n})\ \ dS + \frac{1}{V}\oiint_{\partial V_\alpha}(\boldsymbol{\tau}_\alpha-\rho_\alpha\mathbf{v}_\alpha\Delta\mathbf{v}_\alpha\cdot\mathbf{n})\ \ dS_\alpha. \end{aligned} \tag{16}$$

In the original Eq. (16), "$\frac{\partial}{\partial t}$" acted on both box functions in one of the terms in the right hand of the equation.

$$\int_{\mathbf{L}_{kl}} \delta_A^n(\mathbf{x}-\boldsymbol{\varphi})d\boldsymbol{\varphi} \equiv \frac{1}{A}\iint_{\mathbf{A}^n}\int_{\mathbf{L}_{kl}} \delta(\mathbf{x}+\mathbf{x}'-\boldsymbol{\varphi})d\boldsymbol{\varphi}\cdot\mathbf{n}dS = \frac{1}{A}\begin{cases} 1 & \text{if } \mathbf{L}_{kl} \text{ intersects } \mathbf{A}^n \text{ and } \mathbf{n}\cdot\mathbf{L}_{kl}\geq 0, \\ -1 & \text{if } \mathbf{L}_{kl} \text{ intersects } \mathbf{A}^n \text{ and } \mathbf{n}\cdot\mathbf{L}_{kl}<0, \\ 0 & \text{if } \mathbf{L}_{kl} \text{ does not intersect } \mathbf{A}^n. \end{cases} \tag{A3}$$

$$\bar{\delta}_A^n(\mathbf{x}-\mathbf{r}_k)\tilde{\mathbf{v}}_k \equiv \frac{1}{A\Delta t}\iint_{\mathbf{A}^n}\int_0^{\Delta t} \delta(\mathbf{x}+\mathbf{x}'-\mathbf{r}_k)\tilde{\mathbf{v}}_k\cdot\mathbf{n}d\tau dS = \frac{1}{A\Delta t}\begin{cases} 1 & \text{if } \mathbf{r}_k \text{intersects } \mathbf{A}^n \text{ in } \Delta t \text{ and } \mathbf{n}\cdot\tilde{\mathbf{v}}_k\geq 0, \\ -1 & \text{if } \mathbf{r}_k \text{intersects } \mathbf{A}^n \text{ in } \Delta t \text{ and } \mathbf{n}\cdot\tilde{\mathbf{v}}_k<0, \\ 0 & \text{if } \mathbf{r}_{kl} \text{does not intersect } \mathbf{A}^n. \end{cases} \tag{A4}$$

In the original Eqs. (A2) and (A4), the centered dot "·" was misplaced.

REFERENCES

[1]Y. Chen, S. Shabanov, and D. L. McDowell, J. Appl. Phys. **126**(10), 101101 (2019).