Advanced Modeling and Simulation in Engineering Sciences

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Correction to: Reduced integration schemes in micromorphic computational homogenization of elastomeric mechanical metamaterials

Ondřej Rokoš[1*], Jan Zeman[1], Martin Doškář[1] and Petr Krysl[2]

The original article can be found online at https://doi.org/10.1186/s40323-020-00152-7.

*Correspondence:
o.rokos@tue.nl
[1]Department of Mechanics, Faculty of Civil Engineering, Czech Technical University in Prague, Thákurova 7, 166 29 Prague 6, Czech Republic
Full list of author information is available at the end of the article

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Following publication of the original article [1], the authors reported the errors in the equations. In Eqs. (2), (3) and (22), at the end of all integrals, $\mathrm{d}\vec{X}_{\mathrm{m}}\mathrm{d}\vec{X}$ has been changed to $\mathrm{d}\vec{X}_{\mathrm{m}}\,\mathrm{d}\vec{X}$. The corrected equations are given below:

$$\mathcal{E}(\vec{u}) = \frac{1}{|\Omega_{\mathrm{m}}|} \int_{\Omega} \int_{\Omega_{\mathrm{m}}} W(\vec{X}, \boldsymbol{F})\,\mathrm{d}\vec{X}_{\mathrm{m}}\,\mathrm{d}\vec{X}. \tag{2}$$

$$\delta\mathcal{E}(\vec{u}; \delta\vec{u}) = \frac{1}{|\Omega_{\mathrm{m}}|} \int_{\Omega} \int_{\Omega_{\mathrm{m}}} \boldsymbol{P} : \vec{\nabla}_{\mathrm{m}}\delta\vec{u}(\vec{X}, \vec{X}_{\mathrm{m}})\,\mathrm{d}\vec{X}_{\mathrm{m}}\,\mathrm{d}\vec{X}, \tag{3}$$

$$\delta^2\mathcal{E}(\vec{u}; \delta\vec{u}) = \frac{1}{|\Omega_{\mathrm{m}}|} \int_{\Omega} \int_{\Omega_{\mathrm{m}}} \vec{\nabla}_{\mathrm{m}}\delta\vec{u}(\vec{X}, \vec{X}_{\mathrm{m}}) : \mathbb{C} : \vec{\nabla}_{\mathrm{m}}\delta\vec{u}(\vec{X}, \vec{X}_{\mathrm{m}})\,\mathrm{d}\vec{X}_{\mathrm{m}}\,\mathrm{d}\vec{X}, \tag{22}$$

The original article [1] has been updated.

Author details
[1]Department of Mechanics, Faculty of Civil Engineering, Czech Technical University in Prague, Thákurova 7, 166 29 Prague 6, Czech Republic, [2]Structural Engineering Department, University of California, La Jolla, San Diego, USA.

Reference
1. Rokoš O, Zeman J, Doškář M, Krysl P. Reduced integration schemes in micromorphic computational homogenization of elastomeric mechanical metamaterials. Adv Model Simul Eng Sci. 2020;7:19. https://doi.org/10.1186/s40323-020-00152-7.

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