

Corrigendum to

Overcoming the cohesive zone limit in composites delamination: modeling with slender structural elements and higher-order adaptive integration (International Journal for Numerical Methods in Engineering, (2020), 121, 24, (5511-5545), 10.1002/nme.6497)

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Overcoming the cohesive zone limit in composites delamination: modeling with slender structural elements and higher-order adaptive integration

(*Int. J. Numer. Meth. Engng.* 2020, 121(24): 5511-5545; DOI:10.1002/nme.6497)

The authors would like to point out three writing mistakes that have been found after the publication of the original paper:

- Equation (13) should be written as:

$$\mathbf{q}^{\text{CE}} = \begin{bmatrix} \mathbf{u}^{\text{bot}} \\ \mathbf{a}^{\text{bot}} \\ \mathbf{u}^{\text{top}} \\ \mathbf{a}^{\text{top}} \end{bmatrix} \quad (1)$$

to correctly represent the intended column vector of the element's degrees of freedom.

- Equation (49) and (50) should be written as:

$$\begin{aligned} \frac{\partial^2 \gamma_\xi}{\partial \xi \partial \mathbf{q}^{\text{CE}}} &= \frac{1}{2} \left[\frac{\partial \mathbf{N}^u}{\partial \xi}, -\frac{h^{\text{bot}}}{2} \cos \theta^{\text{bot}} \frac{\partial \mathbf{N}^\theta}{\partial \xi}, \frac{\partial \mathbf{N}^u}{\partial \xi}, \frac{h^{\text{top}}}{2} \cos \theta^{\text{top}} \frac{\partial \mathbf{N}^\theta}{\partial \xi} \right] \\ &+ \frac{1}{2} \mathbf{q}^{\text{CE}T} \begin{bmatrix} \mathbf{0} \\ \frac{h^{\text{bot}}}{2} \sin \theta^{\text{bot}} \frac{\partial \mathbf{N}^\theta}{\partial \xi} \otimes \frac{\partial \theta^{\text{bot}}}{\partial \mathbf{q}^{\text{CE}}} \\ \mathbf{0} \\ -\frac{h^{\text{top}}}{2} \sin \theta^{\text{top}} \frac{\partial \mathbf{N}^\theta}{\partial \xi} \otimes \frac{\partial \theta^{\text{top}}}{\partial \mathbf{q}^{\text{CE}}} \end{bmatrix} \end{aligned} \quad (2)$$

$$\begin{aligned} \frac{\partial^2 \gamma_\eta}{\partial \xi \partial \mathbf{q}^{\text{CE}}} &= \frac{1}{2} \left[\mathbf{0}, \frac{\partial \mathbf{N}^v}{\partial \xi} - \frac{h^{\text{bot}}}{2} \sin \theta^{\text{bot}} \frac{\partial \mathbf{N}^\theta}{\partial \xi}, \mathbf{0}, \frac{\partial \mathbf{N}^v}{\partial \xi} + \frac{h^{\text{top}}}{2} \sin \theta^{\text{top}} \frac{\partial \mathbf{N}^\theta}{\partial \xi} \right] \\ &+ \frac{1}{2} \mathbf{q}^{\text{CE}T} \begin{bmatrix} \mathbf{0} \\ -\frac{h^{\text{bot}}}{2} \cos \theta^{\text{bot}} \frac{\partial \mathbf{N}^\theta}{\partial \xi} \otimes \frac{\partial \theta^{\text{bot}}}{\partial \mathbf{q}^{\text{CE}}} \\ \mathbf{0} \\ \frac{h^{\text{top}}}{2} \cos \theta^{\text{top}} \frac{\partial \mathbf{N}^\theta}{\partial \xi} \otimes \frac{\partial \theta^{\text{top}}}{\partial \mathbf{q}^{\text{CE}}} \end{bmatrix} \end{aligned} \quad (3)$$

to keep the vector format consistent across the terms. The derivations afterwards are not affected by this change.

- Equation (63) should have no minus sign on the second term of the second row, that was a typographical error. The correct Equation (63) should be written as:

$$\mathbf{B}^\Delta = \mathbf{N}^{\text{CE}} + \begin{bmatrix} \mathbf{0}, & \mathbf{0}, & \mathbf{0}, & \mathbf{0} \\ \mathbf{0}, & \frac{h^{\text{bot}}}{2} \mathbf{N}^\theta, & \mathbf{0}, & \frac{h^{\text{top}}}{2} \mathbf{N}^\theta \end{bmatrix} \quad (4)$$

The above mistakes appear only in the writing of the manuscript, not in the actual implementation of the method. Hence, the results and conclusions in the original paper remain unchanged.

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