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CORRECTION

# Correction to: Phase field fracture in elasto-plastic solids: a length-scale insensitive model for quasi-brittle materials

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**Correction to: Computational Mechanics (2020) 66:931–961**
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The original article contained typographical errors that a number of double brackets $[\![\,]\!]$ were missing in Sect. 3.3 and Table 2.

In Sect. 3.3, $d'(0)$, $\Lambda(0)$ and $u(0)$ should be replaced by $\left[\!\left[d'\right]\!\right](0)$, $[\![\Lambda]\!](0)$ and $[\![u]\!](0)$, respectively, in Eqs. (40)–(42) and related paragraphs on Pages 938 and 940. The corrected equations read:

$$\left[\!\left[d'\right]\!\right](0) = -\frac{2}{l_c}\sqrt{H(\sigma, d(0), C)} \tag{40}$$

$$[\![\Lambda]\!](0) = \frac{-g_f l_c \left[\!\left[d'\right]\!\right](0)}{2[1-d(0)]\sigma_{y0}} = \frac{[1-d(0)]g_f\sqrt{H(\sigma, d(0), C)}}{\sigma_t} \tag{41}$$

$$U = 2\int_0^{L/2} \frac{\sigma}{(1-d)^2 E_0} dx + [\![\Lambda]\!](0) \tag{42}$$

In Table 2, the governing equations in the singular domain $\Gamma$ need to be corrected as:

| Equilibrium equations | Plasticity conditions | Damage conditions |
|---|---|---|
| Singular domain $\Gamma$ | | |
| $[\![\sigma]\!] = 0$ | KKT conditions: $[\![\dot{\Lambda}]\!] \geq 0, f_0^p \leq 0, [\![\dot{\Lambda}]\!] f_0^p = 0$ | KKT conditions: $\dot{d} \geq 0, f^d \leq 0, \dot{d} f^d = 0$ |
| | Yield function: $f_0^p := \lvert\sigma_0\rvert - \sigma_{y0}$ | Yield function: $f^d := 2(1-d)\sigma_{y0}[\![\Lambda]\!] + g_f l_c \left[\!\left[d'\right]\!\right]$ |
| | Flow rule: $\lVert\dot{u}\rVert = \text{sign}(\sigma)\left[\!\left[\dot{\Lambda}\right]\!\right]$ | |

In addition, Eq. (A4) should be corrected as:

The original article can be found online at https://doi.org/10.1007/s00466-020-01887-1.

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$$\int_{\Omega} -(\mathrm{div}\boldsymbol{\sigma} + \mathbf{b}) \cdot \delta\mathbf{u} \mathrm{d}\Omega + \int_{\partial\Omega} (\mathbf{n} \cdot \boldsymbol{\sigma} - \mathbf{t}) \cdot \delta\mathbf{u} \mathrm{d}\partial\Omega = 0 \quad \text{(A4)}$$