

Correction



## **Correction: An Extended Damage Plasticity Model for Shotcrete: Formulation and Comparison with Other Shotcrete Models**

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The authors would like to correct following typing errors: For (3) and (4), the correct expressions are given as

$$f_{\rm p}(\bar{\sigma}_{\rm m},\bar{\rho},\theta,q_{\rm h}(\alpha_{\rm p}),t) = \left( (1-q_{\rm h}(\alpha_{\rm p})) \left( \frac{\bar{\rho}}{\sqrt{6}f_{\rm cu}(t)} + \frac{\bar{\sigma}_{\rm m}}{f_{\rm cu}(t)} \right)^2 + \sqrt{\frac{3}{2}} \frac{\bar{\rho}}{f_{\rm cu}(t)} \right)^2 + m_0 q_{\rm h}^2(\alpha_{\rm p}) \left( \frac{\bar{\rho}}{\sqrt{6}f_{\rm cu}(t)} r(\theta) + \frac{\bar{\sigma}_{\rm m}}{f_{\rm cu}(t)} \right) - q_{\rm h}^2(\alpha_{\rm p}),$$

$$(1)$$

$$g_{\rm p}(\bar{\sigma}_{\rm m},\bar{\rho},q_{\rm h}(\alpha_{\rm p}),t) = \left( (1-q_{\rm h}(\alpha_{\rm p})) \left( \frac{\bar{\rho}}{\sqrt{6}f_{\rm cu}(t)} + \frac{\bar{\sigma}_{\rm m}}{f_{\rm cu}(t)} \right)^2 + \sqrt{\frac{3}{2}} \frac{\bar{\rho}}{f_{\rm cu}(t)} \right)^2 + q_{\rm h}^2(\alpha_{\rm p}) \left( \frac{m_0\bar{\rho}}{\sqrt{6}f_{\rm cu}(t)} + \frac{m_{\rm g}(\bar{\sigma}_{\rm m})}{f_{\rm cu}(t)} \right),$$
(2)

corresponding to the respective time-independent equations in [1].

For (14), parameter  $c_{\rm f}$  is computed as

$$c_{\rm f} = \left. \frac{\mathrm{d}\beta_{\rm f}^{\rm II}}{\mathrm{d}t} \right|_{t=t_{\rm f}} - 2\,d_{\rm f}\,t_{\rm f}.\tag{3}$$

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The changes do not affect the results. The manuscript will be updated, and the original one will remain available on the article webpage.

## Reference

1. Grassl, P.; Jirásek, M. Damage-plastic model for concrete failure. Int. J. Solids Struct. 2006, 43, 7166–7196.



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