

Corrigendum to “Hydro-mechanical network modelling of particulate composites”

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Correction

The paper entitled ”Hydro-mechanical network modelling of particulate composites” in Athanasiadis et al. (2018) contains typos in the equations of the yield surface and plastic potential.

The yield surface in (21) in Athanasiadis et al. (2018) should state

$$f = \begin{cases} \alpha^2 \bar{\sigma}_n^2 + 2 \frac{\alpha^2 (f_c - \alpha\beta f_t)}{(1 + \alpha\beta)} q \bar{\sigma}_n + \bar{\sigma}_q^2 - \frac{2\alpha^2 f_c f_t + \alpha^2 (1 - \alpha\beta) f_t^2}{1 + \alpha\beta} q^2 & \text{if } \bar{\sigma}_n \geq -\frac{f_c - \alpha\beta f_t}{1 + \alpha\beta} q \\ \frac{\bar{\sigma}_n^2}{\beta^2} + 2 \frac{f_c - \alpha\beta f_t}{\beta^2 (1 + \alpha\beta)} q \bar{\sigma}_n + \bar{\sigma}_q^2 + \frac{(1 - \alpha\beta) f_c^2 - 2\alpha\beta f_c f_t}{\beta^2 (1 + \alpha\beta)} q^2 & \text{if } \bar{\sigma}_n < -\frac{f_c - \alpha\beta f_t}{1 + \alpha\beta} q \end{cases} \quad (1)$$

The plastic potential in (23) in Athanasiadis et al. (2018) should be

$$g = \begin{cases} \psi^2 \bar{\sigma}_n^2 + 2 \frac{\psi^2 (f_c - \psi\beta f_t)}{1 + \psi\beta} q \bar{\sigma}_n + \bar{\sigma}_q^2 & \text{if } \bar{\sigma}_n \geq -\frac{f_c - \psi\beta f_t}{1 + \psi\beta} q \\ \frac{\bar{\sigma}_n^2}{\beta^2} + 2 \frac{f_c - \psi\beta f_t}{\beta^2 (1 + \psi\beta)} q \bar{\sigma}_n + \bar{\sigma}_q^2 & \text{if } \bar{\sigma}_n < -\frac{f_c - \psi\beta f_t}{1 + \psi\beta} q \end{cases} \quad (2)$$

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References

Athanasiadis, I.; Wheeler, S. J., and Grassl, P. Hydro-mechanical network modelling of particulate composites. *International Journal of Solids and Structures*, 130–131:49–60, 2018.