



HAL
open science

Correction to: Comparison between thick level set (TLS) and cohesive zone models

Andrés Parrilla Gómez, Nicolas Moes, Claude Stolz

► To cite this version:

Andrés Parrilla Gómez, Nicolas Moes, Claude Stolz. Correction to: Comparison between thick level set (TLS) and cohesive zone models. *Advanced Modeling and Simulation in Engineering Sciences*, 2017, 4 (1), 10.1186/s40323-017-0091-2 . hal-03284752

HAL Id: hal-03284752

<https://hal.science/hal-03284752>

Submitted on 30 May 2024

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution 4.0 International License

CORRECTION

Open Access



Correction to: Comparison between thick level set (TLS) and cohesive zone models

Andrés Parrilla Gómez¹, Nicolas Moës^{1*} and Claude Stolz^{1,2}

*Correspondence:

nicolas.moes@ec-nantes.fr
¹GeM, UMR CNRS 6183, Ecole Centrale de Nantes, 1 rue de la Noë, 44321 Nantes, France
 Full list of author information is available at the end of the article

Correction

In the publication of this article [1], there was an error in some equations.

- Equation (37) should instead read:

$$\hat{\sigma} = F(\lambda I \hat{\sigma}) \quad \text{and} \quad \int_{\tilde{\phi}=0}^{\hat{\ell}} h(\tilde{\phi}) d\tilde{\phi} = -g'_{\text{dam}}(0) \frac{1 - g_{\text{dam}}(d(\hat{\ell}))}{g_{\text{dam}}(d(\hat{\ell}))} \hat{\sigma}^2 \quad (1)$$

- Equation (38) should instead read:

$$\hat{\sigma} = F(\lambda I \hat{\sigma}) \quad \text{and} \quad \int_0^{\hat{\phi}} h(\tilde{\phi}) d\tilde{\phi} = -g'_{\text{dam}}(0) \frac{1 - g_{\text{dam}}(d(\hat{\phi}))}{g_{\text{dam}}(d(\hat{\phi}))} \hat{\sigma}^2 \quad (2)$$

- Equation (45) should instead read:

$$\hat{\sigma} = F(\lambda I \hat{\sigma}) \quad \text{and} \quad \int_0^{\hat{\phi}} h(\tilde{\phi}) d\tilde{\phi} = \frac{d(\hat{\phi})}{1 - d(\hat{\phi})} \hat{\sigma}^2 \quad (3)$$

- Equation (49) should instead read:

$$\hat{\sigma} = F\left(\lambda \frac{\hat{\phi}^2}{1 - \hat{\phi}} \hat{\sigma}\right) \quad \text{and} \quad \int_0^{\hat{\phi}} h(\tilde{\phi}) d\tilde{\phi} = \frac{2\hat{\phi} - \hat{\phi}^2}{(\hat{\phi} - 1)^2} \hat{\sigma}^2 \quad (4)$$

- Equation (50) should instead read:

$$\hat{\sigma}(\hat{\phi}) = \frac{1 - \hat{\phi}}{1 - \hat{\phi} + \lambda \hat{\phi}^2} \quad \text{and} \quad \int_0^{\hat{\phi}} h(\tilde{\phi}) d\tilde{\phi} = \frac{2\hat{\phi} - \hat{\phi}^2}{(1 - \hat{\phi} + \lambda \hat{\phi}^2)^2} \quad (5)$$

- Equation (63) should instead read:

$$H(\hat{\phi}) = \int_0^{\hat{\phi}} h(\tilde{\phi}) d\tilde{\phi} \quad (6)$$

- Equation (65) should instead read:

$$\lambda \leq \frac{1}{2} \quad (7)$$

- Equation (70) should instead read:

$$\mu_n = \min_{\Gamma} \sqrt{\frac{(h(d)Y_c)_n}{\bar{Y}_n}} \quad (8)$$

- In Eq. (75), the expression of β_n should instead read:

$$\beta_n = Y_c \frac{\int_{\phi=0}^{\ell} h'(d) \left(\frac{d'(\phi/\ell_c)}{\ell_c} \right)^2 \left(1 - \frac{\phi}{\rho(s)} \right) d\phi}{\int_{\phi=0}^{\ell} \frac{d'(\phi/\ell_c)}{\ell_c} \left(1 - \frac{\phi}{\rho(s)} \right) d\phi} \quad (9)$$

- Equation (76) should instead read:

$$\Delta\mu_n^{\text{pred}} < \frac{\Delta\phi_{\text{max}}\beta_n - f_n}{\alpha_n} \quad (10)$$

- Equation (77) should instead read:

$$\Delta\mu_n^{\text{pred}} = \min_{\Gamma} \frac{\Delta\phi_{\text{max}}\beta_n - f_n}{\alpha_n} \quad (11)$$

- Equation (78) should instead read:

$$\mu^{\text{corr}} = \sqrt{\frac{(h(d)Y_c)_n}{\bar{Y}_n}} \Big|_{\arg \min_{\Gamma} \frac{\Delta\phi_{\text{max}}\beta_n - f_n}{\alpha_n}} \quad (12)$$

This has now been included in this erratum.

Author details

¹GeM, UMR CNRS 6183, Ecole Centrale de Nantes, 1 rue de la Noë, 44321 Nantes, France, ²IMSIA, UMR CNRS 9219, EdF, Av. Charles de Gaulle, 92141 Clamart, France.

The original article can be found online at <https://doi.org/10.1186/s40323-015-0041-9>.

Publisher's Note

Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Received: 25 October 2017 Accepted: 25 October 2017

Published online: 16 November 2017

Reference

1. Gómez AP, Moës N, Stolz C. Comparison between thick level set (TLS) and cohesive zone models. *Adv. Model. and Simul. in Eng. Sci.* 2015;2:18. <https://doi.org/10.1186/s40323-015-0041-9>.