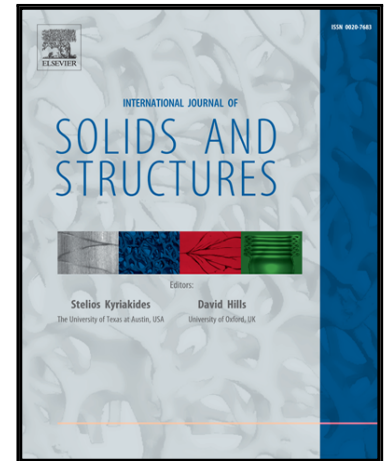


Accepted Manuscript

Numerical analysis of 3D dry-stone masonry structures by combined finite-discrete element method

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PII: S0020-7683(17)30548-6
DOI: [10.1016/j.ijsolstr.2017.12.012](https://doi.org/10.1016/j.ijsolstr.2017.12.012)
Reference: SAS 9830



To appear in: *International Journal of Solids and Structures*

Received date: 6 September 2017
Revised date: 6 November 2017
Accepted date: 8 December 2017

Please cite this article as: Hrvoje Smoljanović , Nikolina Živaljić , Željana Nikolić , Ante Munjiza , Numerical analysis of 3D dry-stone masonry structures by combined finite-discrete element method, *International Journal of Solids and Structures* (2017), doi: [10.1016/j.ijsolstr.2017.12.012](https://doi.org/10.1016/j.ijsolstr.2017.12.012)

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Highlights

- Structural response of dry-stone masonry structures is analysed by a 3D combined finite-discrete element method (FDEM).
- Proposed approach includes modelling of discontinuities across dry joints and fracturing and fragmentation of the blocks, in order to correctly simulate the mechanical behaviour of dry-stone masonry.
- Model is capable of predicting structural damage, failure mechanisms and collapse of these structures under static and seismic loads.
- The influence of the numerical parameters, such as penalty terms and damping coefficient, on the accuracy of the solution was analysed through various examples.

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