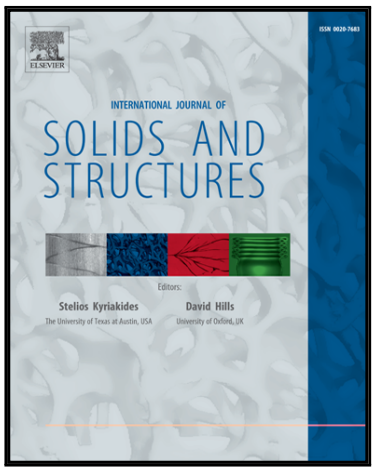

Numerical analysis of 3D dry-stone masonry structures by combined finite-discrete element method

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Highligths

- 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.