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Keynote Paper

Advanced numerical simulations in concrete mechanics

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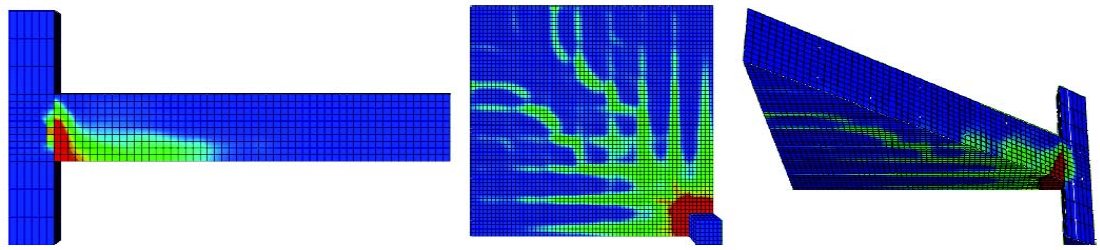
ABSTRACT

The paper focuses on the following three issues: deterministic size effect (Wosatko 2018), punching shear failure for flat slabs without shear reinforcement (Wosatko 2019) and frame corners under opening bending moment (Szczecina 2018). Two materials model are used for the analyses: a gradient enhanced damage model developed by authors (Wosatko 2018) and Concrete Damaged Plasticity model (CDP) available in Abaqus FEA.



(a) Side view. (b) Bottom view. (c) Diagonal section.

Fig. 1 Equivalent tensile plastic strain for punching shear analysis

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