



International Conference on Mathematical Sciences and Technology 2018
(MathTech 2018)

A general numerical approximation of the Stress Characteristic Field at a Singular Point

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Abstract. A general numerical approximation for the construction of the stress characteristic field in the deformation of ideal granular material at a singular point is considered. The self weight of the granular material is neglected and the stresses are assumed to obey the Coulomb yield criterion. A numerical approximation using finite difference method is used to solve a boundary value problem that leads to the construction of a complete stress characteristic field. The method is presented in this paper and tests, within the MATLAB program at each stage of the construction.

Keywords: plasticity, granular, double rotating

Scope of Abstract: Applied Mathematics