



EINLADUNG ZUM VORTRAG

An Introduction to Explicit Stress Integration

by

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The problem of computation of stresses while strains are given is frequently encountered during computations with Finite Elements. Due to the complexity of elasto-plastic constitutive models, the stresses must often be found numerically with use of either implicit or explicit methods. After a brief introduction of the stress integration problem the talk describes explicit stress integration routines which employ Runge-Kutta integration schemes as well as the integration algorithm based on an explicit extrapolation method. Those stress integration methods are compared against each other in terms of stability, accuracy and computation time. The talk concludes giving some insights on how the stress integration scheme may influence the effectiveness and convergence of Newton-Raphson routine which is typically used in Finite Element codes.

Ort: HSB 2

Zeit: Donnerstag, 11. 12. 2008, 15.00 c.t.