

Numerical investigation of large strains of hyperelastic solids

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Abstract

© Published under licence by IOP Publishing Ltd. The work is concerned with numerical investigation of large deformations of hyperelastic solids. The kinematics of continua is described in terms of the deformation gradient tensor and left Cauchy-Green tensor. The stress state is described by the Cauchy stress tensor. An incremental method is used to solve the nonlinear problems. The linearized physical equations for the Cauchy stresses for Mooney-Rivlin material are given.

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