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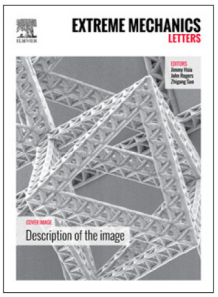

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Constitutive Modelling of Neo-Hookean Materials with Spherical Voids in Finite Deformation

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Abstract

In this paper, we present a new constitutive model to estimate the effective mechanical behaviors of the incompressible neo-Hookean materials with randomly distributed spherical voids under finite deformations. The volumetric multiplicative decomposition is employed to decouple the deformation gradient of a general finite deformation into the corresponding hydrostatic and isochoric part. By deriving and then superposing the

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