

Abstract Submitted
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Discombinations in Nonlinear Elastic Solids ARASH YAVARI, Georgia Institute of Technology — We consider the problem of *discombinations*, that is a combined distribution of fields of dislocations, disclinations, and point defects. Given a discombination, we compute the geometric characteristics of the material manifold (curvature, torsion, non-metricity), its Cartan's moving frames and structural equations. As an example, we calculate the residual stress field of a cylindrically-symmetric distribution of discombinations in an infinite circular cylindrical bar made of an incompressible hyperelastic isotropic elastic solid.

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