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**Metric Description of Defects in Amorphous Elastic Materials**
MICHAEL MOSHE, ERAN SHARON, RAZ KUPFERMAN, Hebrew University of Jerusalem — We suggest a description for dislocations, using a torsion-free Riemannian manifold equipped with a reference metric. This metric expresses the local equilibrium geometry within the material. In this description, dislocations are singularities in the intrinsic curvature structure. The model is not based on a crystalline structure; therefore it can describe dislocations even in amorphous materials. We provide explicit expression for edge dislocation, which is a dipole of curvature. Apparently, higher multipoles of curvature can be used to describe plastic deformations in amorphous materials. The model is supported with experimental results.

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