

T. Lewiński, On Cherkaev–Lurie–Milton theorem in the plane problems of linear elasticity, *Arch . Mech.* 74 (4), 319–339, 2022

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Abstract

The paper delivers a full justification of the Cherkaev–Lurie–Milton theorem in application to the elasticity problem of in-plane loaded plates, 2D periodic elastic composites, elasticity of thin plates subjected to transverse loads as well as in-plane periodic thin plates in bending. The theorem is treated as natural extension of Michell’s result on 2D elasticity and the Gauss–Bonnet formula applied to the deflection surface of a thin plate subject to bending.