On singularities of solution of the elasticity system in a bounded domain with angular corner points

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Abstract

This paper aims to give a mathematically rigorous description of the corner singularities of the weak solutions for the plane linearized elasticity system in a bounded planar domain with angular corner points on the boundary. The qualitative properties of the solution including its regularity depend crucially on these corner points or such types of boundary conditions. In particular, the resulting expansion of the solutions of the underlying problem involves singular vector functions, inlines, depending on a certain parameter ξ_μ. Ωε δεριε τηε τρανσςενδενταλ εχυατιονς φορ αλλ τεν ποσσιβλε ςασες οφ ςομβινατιονς οφ τηε βουνδαρψ ςονδιτιονς γενερατεδ βψ τηε βασις φουρ ον

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