

Singular limit of Lam\''{e} equations

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Abstract

In this paper, we study the asymptotic behavior of the solution to the Lam\''{e} equations with a parameter φ . We prove that the solution will converge to the solution of a Maxwell type equations as $\varphi \rightarrow 0$; Meanwhile we will show that the solution converges to the solution of a Stokes type equations as $\varphi \rightarrow \infty$.

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