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Russell M. Brown* (russell.brown@uky.edu), Department of Mathematics, University of Kentucky, Lexington, KY 40506, and **Irina Mitrea**, Department of Mathematics, University of Virginia, Charlottesville, VA 22904. *The mixed problem for the Lamé system in a class of Lipschitz domains*. Preliminary report.

We consider Lipschitz domains in \mathbf{R}^n , $n \geq 3$, and suppose that we have written $\partial\Omega = N \cup D$ with $D \cap N = \emptyset$. In Ω , we consider the mixed problem for the Lamé system.

$$\begin{cases} Lu = 0, & \text{in } \Omega \\ u = f_D, & \text{in } D \\ \frac{\partial u}{\partial \rho} = f_N, & \text{in } N \end{cases}$$

Here, L is the Lamé operator of linear elasticity and $\partial u/\partial \rho$ is the traction boundary operator. We give conditions on the domain Ω and the sets D and N so that we can find a solution to the mixed problem which satisfies the estimate

$$\|\nabla u\|_{L^2(\partial\Omega)} \leq C(\|f_N\|_{L^2(N)} + \|\nabla_t f_D\|_{L^2(D)} + \|f_D\|_{L^2(D)}).$$

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