

Meeting: 1004, Bowling Green, Kentucky, SS 12A, Special Session on Partial Differential Equations and Their Applications

1004-35-83 **Loredana Lanzani*** (lanzani@uark.edu), Department of Mathematics, University of Arkansas, Fayetteville, AR 72701, and **Elias M Stein**. *Generalized Gagliardo-Nirenberg inequalities and Hodge systems in R^n* .

We show how a natural generalization to forms of the classical Gagliardo-Nirenberg inequality yields a-priori L^p estimates for L^1_{loc} solutions of div-curl and, more generally, the Hodge system with data in $L^1(R^n)$. (Received January 18, 2005)