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**Po Lam Yung\***, Department of Mathematics, Princeton University, NJ 08544. *Sobolev Inequalities for  $(0, q)$  forms on CR manifolds of finite type.*

Recently Bourgain-Brezis and Lanzani-Stein proved the following  $L^1$  Sobolev inequality for differential forms on  $\mathbb{R}^n$ : If  $u$  is a smooth compactly supported  $q$  form on  $\mathbb{R}^n$  and  $q \neq 1$  nor  $n - 1$ , then

$$\|u\|_{L^{\frac{n}{n-1}}(\mathbb{R}^n)} \lesssim \|du\|_{L^1(\mathbb{R}^n)} + \|d^*u\|_{L^1(\mathbb{R}^n)}.$$

I shall discuss an analogue of this result for the  $\bar{\partial}_b$  complex on CR manifolds of finite commutator type. The main innovation here is a new kind of  $L^1$  duality inequality for vector fields that satisfy Hormander's condition. (Received August 25, 2009)