

Meeting: 1002, Pittsburgh, Pennsylvania, SS 12A, Special Session on Geometric Analysis and Partial Differential Equations in Subelliptic Structures

1002-35-238 **Piotr Hajłasz*** (hajlasz@pitt.edu), University of Pittsburgh, Department of Mathematics, 301 Trackeay Hall, Pittsburgh, PA 15260. *A generalization of the Coifman Lions Meyer and Semmes theorem to mappings between manifolds.*

I am going to discuss one result from my recent joint paper with T.Iwaniec, J.Malý and J.Onninen. A well known result of Coifman Lions Meyer and Semmes states that the Jacobian of a $W^{1,n}$ mapping from R^n to R^n belongs to the Hardy space H^1 . I am going to discuss a generalization of this result to the case of mappings between manifolds. It turns out that the generalization is far from being obvious. We hope to find new applications to nonlinear PDE's. (Received September 14, 2004)