1068-30-244 **Shanshuang Yang*** (syang@mathcs.emory.edu), Department of Math and CS, Emory University, 400 Dowman Drive, Atlanta, GA 30322. *Rigidity of Quasiconformal Embeddings.* Preliminary report.

A classical Liouville type theorem asserts that an orientation preserving embedding of the plane $f : \mathbb{C} \to \mathbb{C}$ is 1-quasiconformal (or 1-QC) if and only if it is a linear map: $f(z) = az + b$. A sophisticated version of this result in higher dimensions states that if D is a domain in the Euclidean space $\mathbb{R}^n$ ($n \geq 3$), then an embedding $f : D \to \mathbb{R}^n$ is 1-QC if and only if it is the restriction of a Möbius transformation. In this talk we will discuss the possibilities of generalizing this type of rigidity results to embeddings of a domain $D \subset \mathbb{R}^n$ into a higher dimensional space $\mathbb{R}^m$ (with $m > n$). (Received January 19, 2011)