Meeting: 1001, Evanston, Illinois, SS 12A, Special Session on Iterated Function Systems and Analysis on Fractals

1001-30-142 **Jeremy T. Tyson***, Department of Mathematics, University of Illinois, 1409 W. Green St., Urbana, IL 61801, and **Jang-Mei G. Wu**, Department of Mathematics, University of Illinois, 1409 W. Green St., Urbana, IL 61801. *Quasisymmetric and quasiconformal equivalence of post-critically finite self-similar sets.*

I will discuss the quasisymmetric and quasiconformal classification problems for invariant sets of self-similar iterated function systems. For a certain subclass of post-critically finite systems, topological equivalences promote to quasisymmetric equivalences and homotopies of invariant sets extend to quasiconformal isotopies of the ambient space. We conjecture that these facts hold true for all PCF systems. As an application, we compute the quasiconformal dimension (infimal Hausdorff dimension of quasiconformal images) of certain classical self-similar fractal sets in $\mathbb{R}^n$. (Received August 20, 2004)