1009-37-176   **Marcy Barge** and **Brian F Martensen*** (`martense@rose-hulman.edu`), RHIT, CM 134, 5500 Wabash Ave, Terre Haute, IN 47803. *Tiling spaces associatiated to pseudo-Anosov surface diffeomorphisms.*

We characterize the (substitution) tiling spaces that embed in surfaces with a complete and computable invariant. The substitution induces a pseudo-Anosov map and the tiling space provides a foliation (with singularities) of the surface. Lastly, we will examine some mixing properties of such substitutions. (Received August 15, 2005)