1014-37-1676 **Brian F Martensen*** (martense@rose-hulman.edu), CM 124, Rose-Hulman, 5500 Wabash Ave, Terre Haute, IN 47803. *Mixing and embedding properties of tiling spaces.* Preliminary report.

In this talk, we show that topological mixing and weak mixing are equivalent for certain classes of one-dimensional tiling spaces. We then describe some potential applications of this result to those tiling spaces that embed on surfaces. Such a tiling space induces a pseudo-Anosov map on the surface, which itself induces an Anosov map on an n-dimensional torus. We will end by discussing some open questions as to whether this process embeds the surface into the n-torus or whether it fails to be injective. (Received September 28, 2005)