

1046-37-280

**Jeanette Olli\*** (jollie@email.unc.edu), Campus Box 3250, Chapel Hill, NC 27599.

*Endomorphisms of Various Substitution Systems*. Preliminary report.

Given a system  $(X, T)$  where  $X$  is a Hausdorff space and  $T$  acts on  $X$ , one question to ask is what are the endomorphisms. The endomorphisms of Sturmian and Toeplitz systems are all powers of the shift  $\sigma$ . Generalizing the Sturmian systems to ones based on two values,  $\alpha$  and  $\beta$ , there are cases which do have additional endomorphisms. I also look at properties of a substitution that is a generalization of Conway's pinwheel tiling. (Received August 25, 2008)