1094-57-318 **J. Scott Carter**, **Daniel S. Silver** and **Susan G. Williams*** (swilliam@southalabama.edu), Department of Mathematics and Statistics, ILB 325, University of South Alabama, Mobile, AL 36688. *Invariants of links in thickened surfaces.*

We define a group invariant for links in thickened surfaces, the covering group, and a related polynomial invariant. These invariants generalize the link group and Alexander polynomial of a link in the 3-sphere. The covering group admits a natural action by the group of the surface.

A virtual link is an equivalence class of links in thickened surfaces, allowing addition and deletion of hollow 1-handles. Its virtual genus is the minimal genus of a supporting thickened surface. We show that the virtual genus is determined by the covering group of any representative of the class. Further, we give a readily computable lower bound for virtual genus derived from our polynomial invariant. (Received August 26, 2013)