**Investigating Supersymmetry Through Combinatorics**

-Nick Zolman

An Adinkra is a discrete finite graph that encodes all the information about an off-shell supersymmetry algebra. We investigate how supersymmetry may be linked to other graphs by looking at the relationship between Adinkras and dessins d’enfants (a type of bipartite graph embedded on a Riemann surface). We also look at various graph products involving Adinkras in an attempt to embed supersymmetry into a larger algebra. Our investigation leads us toward the study of origamis and origami curves (a finite covering map of a torus) as a hopeful method of investigating supersymmetry further.