1135-37-2684 **Scott Schmieding**, **Kitty Yang**, **May Mei*** (meim@denison.edu) and **Claire Merriman**. *The automorphism group of the square of a subshift.* Preliminary report.

Let $\mathcal{A}$ be a finite alphabet and X a closed subset of $\mathcal{A}^{\mathbb{Z}}$ invariant under the shift map $\sigma\colon \mathcal{A}^{\mathbb{Z}} \to \mathcal{A}^{\mathbb{Z}}$. The automorphism group $\mathrm{Aut}(X, \sigma)$ consists of homeomorphisms $\phi\colon X \to X$ such that $\phi\sigma = \sigma\phi$, and has been intensely studied over the years. We consider the the following question: when are $\mathrm{Aut}(X, \sigma)$ and $\mathrm{Aut}(X, \sigma^2)$ isomorphic? We give examples where they are known to be isomorphic, and examples where they are not. We then focus on the case where (X, σ) is minimal, and state various results, primarily in the case where (X, σ) has linear complexity. (Received September 26, 2017)