



**Speaker:** Aaron Wootton, University of Portland.

**Title:** Finitely Maximal Cyclic Group Actions on Compact Oriented Surfaces.

**Abstract:** We consider the problem of when a cyclic group of orientation preserving automorphisms  $C_p$  of prime order  $p$  on a compact oriented surface  $S$  of genus  $\sigma \geq 2$  is finitely maximal, meaning there is no non-trivial **finite** supergroup  $G > C_p$  of orientation preserving automorphisms of  $S$ . We show that such a supergroup always exists unless the number of fixed points of the action is maximal (or equivalently, the quotient genus  $S/C_p$  is minimal). Moreover, we exhibit an infinite sequence of genera within which  $C_p$  is never finitely maximal.