1108-57-370 **Christian R Millichap*** (`christian.millichap@gmail.com`). *Commensurability classes and geometric invariants of hyperbolic knot complements.*

This talk will discuss a construction used to create large classes of hyperbolic knot complements that have a number of geometric invariants in common yet are pairwise incommensurable, i.e., don't share a common finite-sheeted cover. A topological cut and paste operation known as mutation will play an essential role in creating these geometrically similar hyperbolic 3-manifolds. A careful cusp analysis of such knot complements will be used to examine their commensurability classes. We will also briefly discuss how these techniques can be generalized to examine commensurability classes and geometric invariants of other types of hyperbolic knot complements. (Received January 18, 2015)