

# Algebra/Topology Seminar

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## FAMILIES OF GROUPS ENCODED INTO THOMPSON-ESQUE LIMITS

Thursday, September 18, 2014  
1:15 p.m. in ES-143

ABSTRACT. Thompson's group  $V$  provides a way of encoding every symmetric group (and hence every finite group) into a single object, which is necessarily incredibly vast but nonetheless finitely presented. In joint work with Stefan Witzel, we have developed a procedure for taking any family of groups equipped with what we call a cloning system, and encoding all of them into a single Thompson-esque group. For many new examples we have proved "finiteness properties" similar to those enjoyed by  $V$ . I will start at the beginning and mostly discuss the (previously established) examples where the starting groups are the symmetric groups, yielding  $V$ , and the braid groups, yielding Matt Brin's braided  $V$ . I will also touch on new examples including ones where the starting groups are matrix groups or loop braid groups.