1147-37-650 Andrew Bridy (andrew.bridy@yale.edu), Department of Mathematics, Yale University, John R. Doyle\* (jdoyle@latech.edu), Department of Mathematics and Statistics, Louisiana Tech University, Dragos Ghioca (dghioca@math.ubc.ca), Department of Mathematics, University of British Columbia, Liang-Chung Hsia (hsia@math.ntnu.edu.tw), Department of Mathematics, National Taiwan Normal University, and Thomas J. Tucker (thomas.tucker@rochester.edu), Department of Mathematics, University of Rochester. Finite index theorems for unicritical polynomials over function fields.

Let K be a field. There is a rapidly growing literature on the Galois theory of the fields  $K_{f,\beta}$  obtained by adjoining all iterated preimages of a basepoint  $\beta \in \mathbb{P}^1(K)$  under a rational map  $f(z) \in K(z)$ . We discuss two main finiteness results when K is the function field of a curve over  $\overline{\mathbb{Q}}$  and f is a unicritical polynomial: the first is a finite index result for the arboreal Galois representation associated to  $(f, \beta)$ , and the second is a linear disjointness statement for different fields of the form  $K_{f,\beta}$ . (Received January 27, 2019)