

1105-11-284

Rafe Jones*, 1 North College St, Northfield, MN 55122. *Arboreal Galois representations.*

Iteration of a rational function $f \in K(x)$ (K a global field) gives rise to a Galois representation in a natural way: the successive pre-images of zero form an infinite rooted tree, upon which the absolute Galois group of K acts as tree automorphisms. These are known as arboreal Galois representations, and I will give an overview of what is known about them, especially the size of their images and properties of Frobenius conjugacy classes. I'll state a conjecture that these representations have only a finite number of orbits on the set of infinite branches of the tree, except in certain very special circumstances, and discuss recent results in this direction. (Received September 22, 2014)