1116-05-1043 **Mark E. Watkins*** (`mewatkin@syr.edu`), Mathematics Department, 215 Carnegie, Syracuse University, Syracuse, NY 13244-1150. *Infinite Graphical Frobenius Representations.*

A *graphical Frobenius representation (GFR)* of a Frobenius (permutation) group G is a graph Γ whose automorphism group $\mathrm{Aut}(\Gamma)$ acts as a Frobenius permutation group on the vertex set of Γ, that is, $\mathrm{Aut}(\Gamma)$ acts vertex-transitively with the property that all nonidentity automorphisms fix either one or zero vertices and there are some of each kind.

The set K of all fixed-point-free automorphisms together with the identity is called the *kernel* of G. Whenever G is finite, K is a regular normal subgroup of G (F. G. Frobenius, 1901), in which case Γ is a Cayley graph of K. The same holds true for the infinite instances presented here.

Infinite, locally finite, vertex-transitive graphs can be classified with respect to (i) their number of *ends* and (ii) their *growth rate*. We present families of infinite GFRs for all possible combinations of these properties. There exist GFRs with polynomial growth of degree d for every positive integer d, and there are GFRs of exponential growth, both 1-ended and infinitely-ended, that are infinite chiral maps in the hyperbolic plane. (Received September 16, 2015)