For a 1-parameter family of rational maps, we can ask which parameter values make the corresponding map post-critically finite with a certain dynamical portrait. Most studies were about the family of unicritical polynomial maps $z \mapsto z^d + c$, where such parameter values are the roots of a polynomial called Gleason polynomial, or Misiurewicz polynomial in strictly preperiodic cases. In this talk, we construct Misiurewicz polynomials for a family of rational maps of degree $d \geq 2$ with an automorphism group containing the cyclic group of order $d$, and consider the irreducibility of those polynomials in certain cases. (Received September 09, 2020)