

1056-37-669

Patrick Ingram* (pingram@math.uwaterloo.ca), Department of Pure Mathematics, University of Waterloo, Waterloo, Ontario N2L 3G1, Canada. *Multipliers of periodic cycles for cubic polynomials.*

The moduli space of cubic polynomials with a marked point of period N is a 2-dimensional algebraic variety, and admits a natural fibration by the multiplier map. We'll look at the geometry of the generic fiber, and discuss the existence of sections of the fibration. The case $N = 2$ is particularly interesting, and we will describe all sections of the base extension of this surface corresponding to making the multiplier an m th power (for arbitrary m). (Received September 15, 2009)