1078-37-25   **Hasina Akter*** (`hasinaakter@my.unt.edu`), Department of Mathematics, University of North Texas, 1155 Union Circle #311430, Denton, TX 76203, and **Mariusz Urbanski**. *Real analyticity of Hausdorff dimension of Julia sets of parabolic polynomial $f_\lambda(z) = z(1 - z - \lambda z^2)$*. Preliminary report.

Let D_0 denote the set of all parameters $\lambda \in \mathbf{C} \setminus \{0\}$ for which the cubic polynomial f_λ is parabolic and has no parabolic or finite attracting periodic cycles other than 0. We prove that D_0 contains a deleted neighborhood of the origin 0. Our main result is that the function $D_0 \ni \lambda \mapsto \mathrm{HD}(J(f_\lambda)) \in \mathbf{R}$ is real-analytic. This function ascribes to the polynomial f_λ the Hausdorff dimension of its Julia set $J(f_\lambda)$. The theory of parabolic and hyperbolic graph directed Markov systems with infinite number of edges is used in the proofs. (Received October 19, 2011)