Publ. Mat. **56** (2012), 127–146
DOI: 10.5565/PUBLMAT_56112_05

GREEN CURRENTS FOR QUASI-ALGEBRAICALLY STABLE MEROMORPHIC SELF-MAPS OF $\mathbb{P}^k$

Viêt-Anh Nguyên

Abstract: We construct a canonical Green current T_f for every quasi-algebraically stable meromorphic self-map f of $\mathbb{P}^k$ such that its first dynamical degree $\lambda_1(f)$ is a simple root of its characteristic polynomial and that $\lambda_1(f) > 1$. We establish a functional equation for T_f and show that the support of T_f is contained in the Julia set, which is thus non empty.

2010 Mathematics Subject Classification: Primary: 37F; Secondary: 32U40, 32H50.

Key words: quasi-algebraically stable meromorphic map, algebraic degree, first dynamical degree, Green current.