Year: 2012 Vol.: 80 Fasc.: 3-4

Title: Comments on the distribution modulo one of powers of Pisot and Salem numbers

Author(s): Toufik Zaïmi

We consider the sequence of distances to the nearest integer $\|\lambda\alpha^n\|$, n = 1, 2, 3, ...,where λ is a real number and α is a Salem number. We prove a characterization of the numbers λ satisfying the inequality $\limsup_{n\to\infty} \|\lambda\alpha^n\| < \varepsilon$, where $\varepsilon \in [0, C(\alpha)]$ and $C(\alpha)$ is the inverse of the length of the minimal polynomial of α . This allows us to extend a related result, on Salem numbers, due to A. H. FAN and J. SCHMELING [5].

Address: Toufik Zaïmi Département de mathématiques Université Larbi Ben M'hidi Oum El Bouaghi 04000 Algerie