A SPECIAL CASE OF RATIONAL $\theta$S FOR TERMINATING $\theta$-EXPANSIONS

Santanu Chaktaborty

Abstract. There have been quite a few generalizations of the usual continued fraction expansions over the last few years. One very special generalization deals with $\theta$-continued fraction expansions or simply $\theta$-expansions introduced by Bhattacharya and Goswami [1]. Chakraborty and Rao [3] subsequently did elaborate studies on $\theta$-expansions in their paper. They also obtained the unique invariant measure for the Markov process associated with the generalized Gauss transformation that generated $\theta$-expansions for some special $\theta$s. In this work, we investigate an interesting question regarding the nature of $\theta$s for $\theta$-expansion of $\frac{1}{\theta}$ terminating at stage two, particularly with $\theta$ rational.

Full text

References


2010 Mathematics Subject Classification: 11J70; 37A45; 37E05.
Keywords: $\theta$-expansions; Generalized Gauss map; Invariant measure.

Santanu Chaktaborty  
The University of Texas-Pan American,  
1201 West University, Edinburg, Tx, 78541, USA.  
e-mail: schakraborty@utpa.edu

***********************************************************************

Surveys in Mathematics and its Applications 8 (2013), 59 – 76  
http://www.utgjiu.ro/math/sma