

Year: 2014

Vol.: 84

Fasc.: 1-2

**Title:** On common factors within a series of consecutive terms of an elliptic divisibility sequence

**Author(s):** Lajos Hajdu and Márton Szikszai

We prove that for any elliptic divisibility sequence and any sufficiently large integer  $k$ , one can find  $k$  consecutive terms of the sequence such that none of these terms is coprime to all the others. In other words, elliptic divisibility sequences are *Pillai sequences*, named for a problem posed originally by Pillai for the sequence of integers. In fact we give an upper bound for the smallest value  $k_0$  past which this property is valid. We also provide a more general theorem where the coprimality condition is severely relaxed. In case of some particular sequences we give the values of  $k_0$ , as well.

**Address:**

Lajos Hajdu  
University of Debrecen  
Institute of Mathematics  
P.O. Box 12  
H-4010 Debrecen  
Hungary

**Address:**

Márton Szikszai  
University of Debrecen  
Institute of Mathematics  
P.O. Box 12  
H-4010 Debrecen  
Hungary