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Representing Positive Integers as a Sum of Linear Recurrence Sequences, Fibonacci Quart. 50 (2012), no. 2, 99–105

Abstract
The Zeckendorf representation, using sums of Fibonacci numbers, is widely known. Fraenkel generalized to recurrence sequences $u_n = a_1u_{n-1} + \cdots + a_hu_{n-h}$ provided $a_1 \geq a_2 \geq \cdots \geq a_h \geq 0$. We remove this restriction, but do assume $a_i \geq 0$, and show that a unique representation of every positive integer is possible with digit strings composed of certain blocks which are lexicographically less than $a_1a_2\cdots a_h$. 