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Trevor E McGuire* (TMcGui1@lsu.edu), 303 Lockett Hall, LSU, Baton Rouge, LA 70803. *On Periodicity of some Fibonacci-like Sequences.*

In recent years, random Fibonacci sequences have been studied in great detail, especially since Viswanath's 2000 result that they grow exponentially. Stemming from this research, it has been shown that one can modify the generating algorithm of the Fibonacci sequence in a natural way to generate periodic sequences. Namely, instead of adding the previous two terms together to get the next term, one subtracts, instead of adds, according to a given pattern called a motif. In this research, we examine the standard case of adding or subtracting two terms, and then generalize most results to the so-called n-nacci sequence. We will see the conditions under which a motif gives rise to a periodic sequence, and also some interesting properties of the lengths of the periods and their relation to prime numbers. (Received September 22, 2010)