R. S. Melham

*New Identities Satisfied by Powers of Fibonacci and Lucas Numbers*,
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**Abstract**

The impetus for this research came from previous work of the author and others. This work centered around finding generalizations of the identities

\[ F_{2n+1}^2 + F_n^2 = F_{2n+1}, \]
\[ F_{n+1}^3 + F_n^3 - F_{n-1}^3 = F_{3n}, \]

and of their higher power analogues. The main result in this paper represents an addition to the literature of such identities. Specifically, the main result is an identity satisfied by \( m \)th powers of Fibonacci numbers in which the subscripts of the Fibonacci numbers involved are arbitrarily spaced. From this main result, additional (similar) identities that involve the Fibonacci/Lucas numbers arise as so-called *dual* identities.