1145-05-297 **Curtis Bennett*** (curtis.bennett@csulb.edu), **Juan Carrillo**, **John Machecek** and **Bruce E. Sagan**. *Combinatorial Lattice Path Interpretations of Lucas Analogues.*

The Lucas sequence is a sequence of polynomials in s and t defined recursively by $\{0\} = 0$, $\{1\}$=1, and $\{n\} = s\{n-1\} + t\{n-2\}$ for $n \geq 2$. For $s = 1$ and $t = 1$, $\{n\}$ is the nth Fibonacci number. Given a quantity which is expressed in terms of products and quotients of nonnegative integers, we obtain Lucas analogues by replacing each factor of n in the expression with $\{n\}$. Using lattice paths, we give combinatorial interpretations for the Lucas analogues of the binomial coefficients as well as the Catalan numbers and their relatives, such as those for finite Coxeter groups. We also give combinatorial proofs of certain Lucas analogue identities. (Received August 29, 2018)