

# FIBONACCI CORDIAL LABELING OF CORONA GRAPHS

LUCAS MADER, SARBARI MITRA

*Fort Hays State University*

e-mail: maderlucasj@gmail.com

An injective function  $f$  from vertex set, of a graph  $G$ ,  $V(G)$  to the set  $\{F_0, F_1, F_2, \dots, F_n\}$ , where  $F_i$  is the  $i^{\text{th}}$  Fibonacci number ( $i = 0, 1, \dots, n$ ), is said to be Fibonacci cordial labeling if the induced function  $f^*$  from the edge set  $E(G)$  the set  $\{0, 1\}$  defined by  $f^*(uv) = (f(u) + f(v)) \pmod{2}$  satisfies the condition  $|e_f(0) - e_f(1)| \leq 1$ , where  $e_f(0)$  is the number of edges with label 0 and  $e_f(1)$  is the number of edges with label 1. A graph that admits Fibonacci cordial labeling is called a Fibonacci cordial graph. In 2020, Mitra and Bhoumik discussed whether the corona graphs  $C_n \odot K_m$  for  $m \leq 3$  are Fibonacci cordial. We extend their work for  $C_n \odot K_m$  for  $m \geq 4$  and investigate the conditions under which  $K_{n,n} \odot K_p$  is Fibonacci Cordial.