1086-VN-1934   **Emily A Sasala*** (`sasalaea@jay.washjeff.edu`), Mathematics Department, Washington & Jefferson College, Washington, PA 15301, and **Roman Wong**. *Independent Sets in Chain Paths and Cycles.*

It is known that the number of independent sets in path graphs and cycle graphs are related to Fibonacci numbers and Lucas numbers. We defined a chain path $P_{n,k}$ to be a path P_n with additional paths P_k, at each vertex. A chain cycle is defined similarly. In this talk we investigate independent sets and maximal independent sets in chain paths and cycles. We derive the recursive formulas and the explicit formulas for the number of independent sets in these graphs. (Received September 24, 2012)