1106-VN-1373 **Joe DeMaio*** (jdemaio@kennesaw.edu) and **John Jacobson** (johnjacobson8128@gmail.com).
The Fibonacci Number of the Jellyfish Graph. Preliminary report.

Given a graph $G = (V, E)$, a set $S \subseteq V$ is an independent set of vertices if no two vertices in S are adjacent. Prodinger and Tichy define the **Fibonacci number of a graph** G, $i(G)$, to be the number of independent sets of the graph. They do so because $i(P_n) = F_{n+2}$ and $i(C_n) = L_n$ where F_n and L_n represent the Fibonacci and Lucas sequences. **The Tadpole Graph**, $T_{n,k}$, is the graph created by concatenating C_n and P_k with an edge from any vertex of C_n to a pendent of P_k for integers $n \geq 3$ and $k \geq 0$. Recent work shows $i\left(T_{n,k}\right) = L_{n+k} + F_{n-3}F_k$ where the resulting triangular array of values yields many interesting properties. Generalizing $T_{n,k}$, we define the **Jellyfish Graph** J as the concatenation of a single C_n and paths $P_{k_1}, P_{k_2}, ..., P_{k_m}$ with an edge from any vertex of C_n to a pendent of P_{k_t} for each $t = 1, 2, ..., m$, for integers $n \geq 3$, $k_t \geq 0$, $m \leq n$ where $\Delta(J) = 3$. In this talk we discuss preliminary results of $i(J)$ for $m = 2$. (Received September 12, 2014)