

1145-VP-2653 **Jamie L. Shive***, shivejl@vcu.edu. *Cartesian Product of Palindromic Graphs.*

Palindromic graphs are a class of graphs inspired by the concept of palindromes in words and sequences. A graph G on n vertices is a *palindromic graph* if it has a vertex-labeling bijection $f : V(G) \rightarrow \{1, 2, \dots, n\}$ with the property that $uv \in E(G)$ if and only if there is an edge $xy \in E(G)$ such that $f(x) = n - f(u) + 1$ and $f(y) = n - f(v) + 1$. This concept was introduced by Robert Beeler who presented sufficient conditions on G and H that guarantee that the Cartesian product $G \square H$ is palindromic. We prove that these sufficient conditions are also necessary. (Received September 25, 2018)