1135-VP-1067 **Darren A Narayan*** (dansma@rit.edu), School of Mathematical Sciences, Rochester Institute of Technnology, Rochester, NY 14623. *Shortest paths and centrality in circulant graphs.*

The edge betweenness centrality of an edge $e$ in a graph $G$, denoted $B'_G(e)$, measures the frequency at which $e$ appears on a shortest path between two distinct vertices $x$ and $y$. If the values for $B'_G(e)$ (over all edges in $G$) can be partitioned into $k$ different groups then $G$ is said to have $k-$uniform edge betweenness centrality. We investigate which circulant graphs have $k$-uniform edge centrality where $1 \leq k \leq 3$. Furthermore, for certain subclasses, we precisely determine the different edge betweeness values. (Received September 19, 2017)