1067-05-1555   **Likin C. Simon Romero*** (`lsrsma@rit.edu`), 85 Lomb Memorial Drive, Rochester, NY
14623-5603. *Hyperspace Graph of Connected Subgraphs.*

Given a connected graph G with N edges and a positive integer $n < N + 1$, we define the nth-size level graph $\mathcal{Q}n(G)$ such that every vertex of $\mathcal{Q}_n(G)$ represents a connected subgraph of G with n edges. Similarly, the Hyperspace Graph of Connected Subgraphs $\mathcal{C}(G)$ is the graph such that every vertex represents a connected subgraph of G with a special adjacency relation.

This concept was created by the author as an analogous version to the hyperspace of sets in topology. This work opens a new ground for research. In this talk we will give a detailed explanation of the two definitions and present some results concerning such graphs. (Received September 21, 2010)