**Partitioning Clustering of Graph Using Minimum Sub – cycles**

**Content of Abstract**

- Graph Representation, even in its simplest form, has many applications (give examples).

- There are different types of graph clustering

- Once such type is Partitioning Clustering

- In general, graph clustering is an NP hard problem.

- A common approach is to cluster a graph by means of using different shapes (commonly known as ‘clique’.

- This research is an attempt to Partitioning Clustering of Graph by using minimum cycles as cliques.

- Another necessary consideration is the degrees of density of a cluster.

- In this work, density of a cluster is user-determined.

- The work presents a novel algorithm in to Partitioning Clustering of Graph from a required density.

- The algorithm is tested on various highly connected graphs with different number of nodes and edges and also degrees of density.

- The ‘Difference Density’ is used as a guidance in Partitioning Clustering.

- The results of Partitioning Clustering of two highly connected graphs, with different values of ‘difference density’, are presented.

- Two other metrics ‘Conductance’ and ‘Coverage’ are used as measures of Clustering quality.