Summary for Graph Theory

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1 Common Graph

1.1 Gabriel Gragh (GG)

It is the graph G with vertex set S in which any points are adjacent precisely if they are distinct.

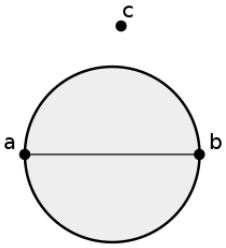

Figure 1: Gabriel Pairs

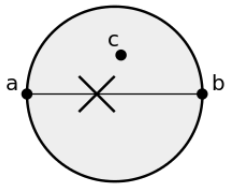

Figure 2: Not Gabriel Pairs

1.2 Relative Neighborhood Graph (RNG)

The relative neighborhood graph (RNG) is an undirected graph defined on a set of points in the Euclidean plane by connecting two points p and q by an edge whenever there does not exist a third point r that is closer to both p and q than they are to each other.

1.3 Urquhart graph

The graph formed by removing the longest edge from every triangle in the Delaunay triangulation, was originally proposed as a fast method to compute the relative neighborhood graph. Although the Urquhart graph sometimes differs from the relative neighborhood graph it can be used as an approximation to the relative neighborhood graph.

References