Structure in Visibility Graphs

David Rappaport
School of Computing
Queen's University
CANADA

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Consider a set S of objects in the plane. We say that two objects a and b from S *see each other* if there exists a straight line segment l with one point in a and one point in b such that l does not intersect any other object in S. The *visibility graph* of S, denoted by Vis(S), associates a vertex to each object of S and an edge between two vertices if the associated objects see each other. There are many natural questions that one may ask about the structure of such graphs. Some examples are:

- What is the size of the largest matching?

- What is the length of the longest path?

- Is the graph Hamiltonian?

I will review some results on these and other structural questions for visibility graphs (and special types of visibility) of a variety of different objects.