Why Are String Graphs So Beautiful?

(Extended Abstract)

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Abstract. String graphs are intersection graphs of continuous simple arcs ("strings") in the plane. They may have a complicated structure, they have no good characterization, the recognition of string graphs is an NP-complete problem. Yet these graphs show remarkably beautiful properties from the point of view of extremal graph theory. What is the explanation for this phenomenon? We do not really know, so we offer three answers. (1) Being a string graph is a hereditary property. (2) String graphs are nicely separable into smaller pieces. (3) As in any geometric picture, one can discover several natural partial orders on a collection of strings.