



The clique problem in ray intersection graphs

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ABSTRACT:

Ray intersection graphs are intersection graphs of rays, or halflines, in the plane. We show that any planar graph has an even subdivision whose complement is a ray intersection graph. The construction can be done in polynomial time and implies that finding a maximum clique in a segment intersection graph is NP-hard. This solves a 21-year old open problem posed by Kratochvíl and Nešetřil.