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The graph isomorphism problem on graphs with geometric representations

The computational complexity of the graph isomorphism problem is a long standing open problem. One of approaches is investigation of the boundary of the difficulty. That is, what the graph class that is easy/hard from the viewpoint of the graph isomorphism. In this talk, we concentrate on the graph classes that have geometric representations. In some case, such a representation helps us to solve the graph isomorphism problem in polynomial time. However, sometimes, the graph isomorphism is as hard as in general case even if they have a simple intersection model. We summarize the recent results about this area.