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*Polynomial Kernel for Interval Vertex Deletion*

Given a graph  $G$  and an integer  $k$ , Interval Vertex Deletion (IVD) asks whether there exists  $S \subseteq V(G)$  of size at most  $k$ , such that  $G-S$  is an interval graph. The existence of polynomial kernel for IVD remained a well-known open problem in Parameterized Complexity. In this talk we will look at a sketch of polynomial kernel for IVD. We will mainly focus on a kernel for IVD, when parameterized by the vertex cover number. The ideas that will be presented are (some of the) key ingredients in our kernel for IVD, when parameterized by the solution size.