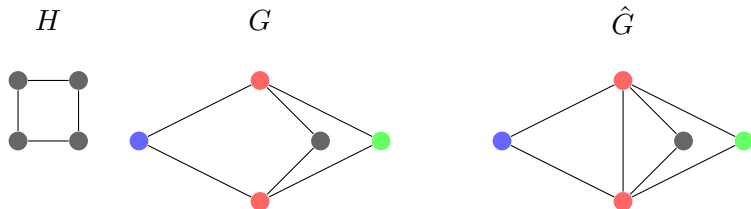


The Hardness of H -Free Edge Editing

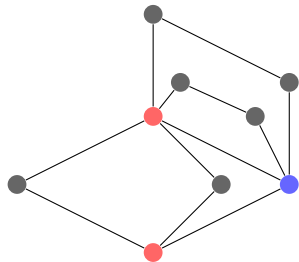
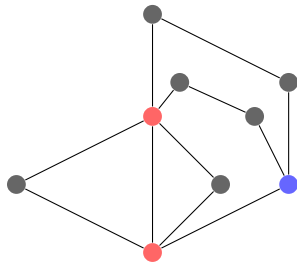
N.R.Aravind

Indian Institute of Technology Hyderabad

H -Free Graphs



\hat{G} is C_4 -free, i.e. has no induced copies of C_4 .

G  \hat{G} 

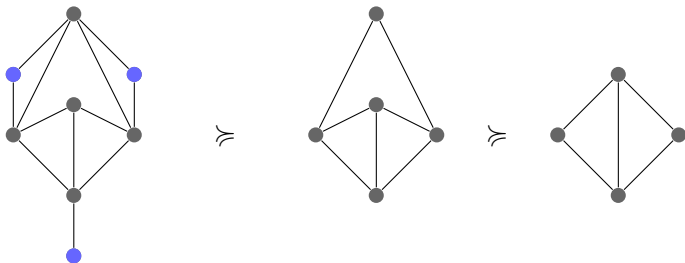
Reduction from high-degree vertices

Lemma

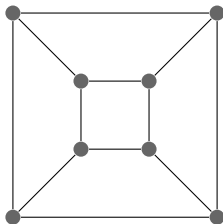
$H\text{-FEE} \succcurlyeq H_1\text{-FEE}$, where $H_1 = H[v : \deg(v) > d]$.



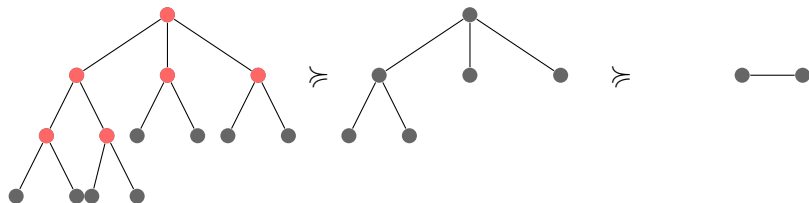
High-degree reduction



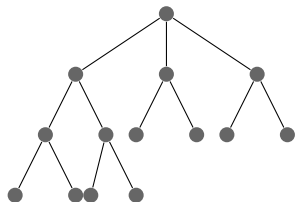
Obstacle 1: Regular graphs



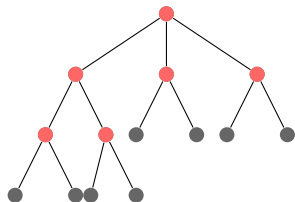
Obstacle 2: Easy graphs



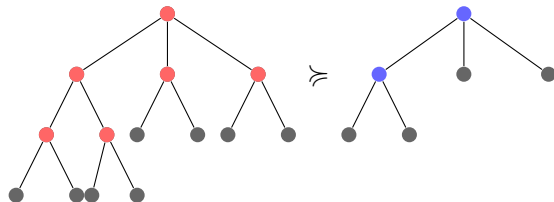
Easy graphs: Using Complement Equivalence



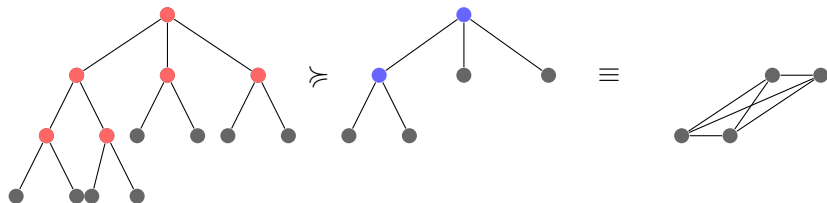
Easy graphs: Using Complement Equivalence



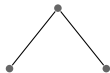
Easy graphs: Using Complement Equivalence



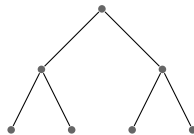
Easy graphs: Using Complement Equivalence



High-degree reduction



P_3



H

