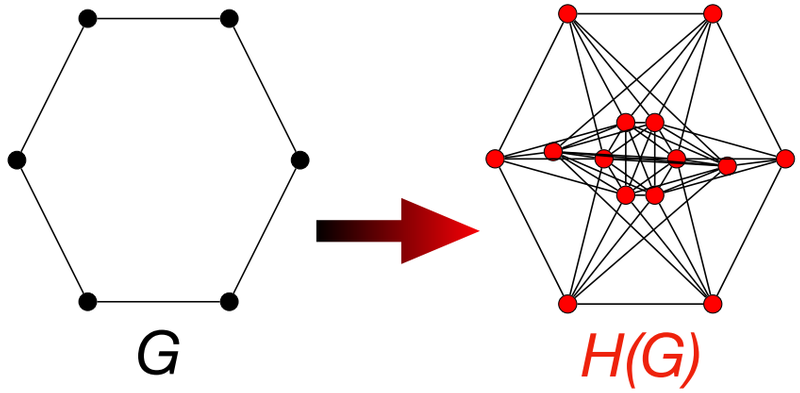
(**Q2**) How big is $H(G)$ with respect to G?

Every graph G can be isometrically embedded into the smallest Helly graph $H(G)$, called the injective hull of G.

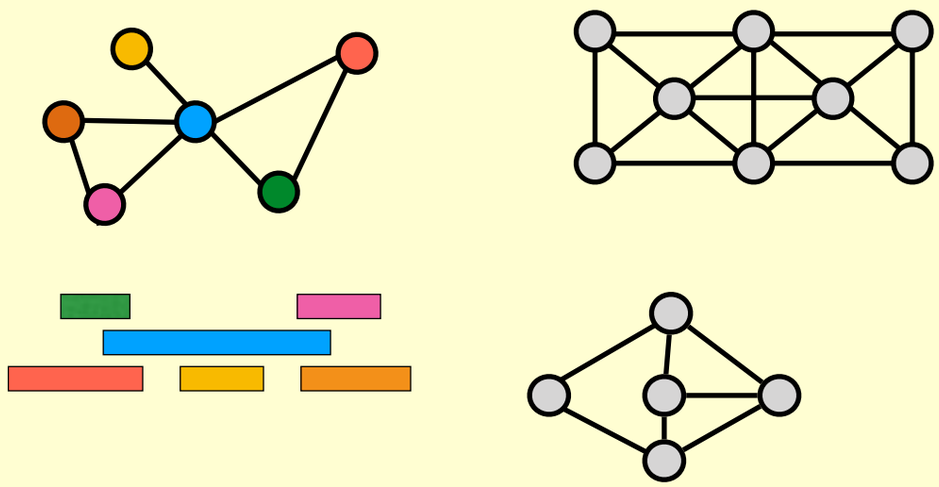


Our Contribution

Theorem [5]: There are some graph classes for which $H(G)$ …

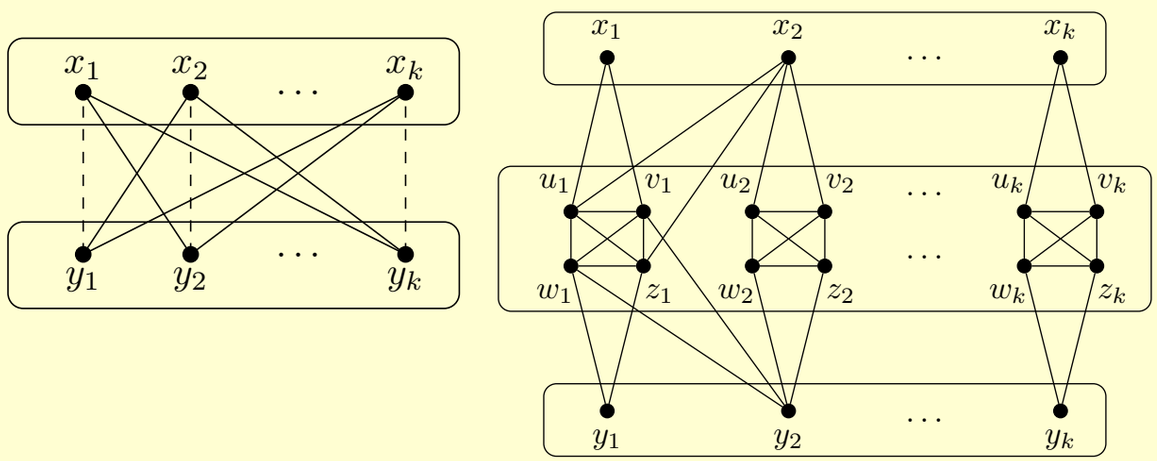
contains at most $2n$ vertices.

- Interval graphs
- Helly graphs
- Distance hereditary graphs



can contain at least 2^n vertices.

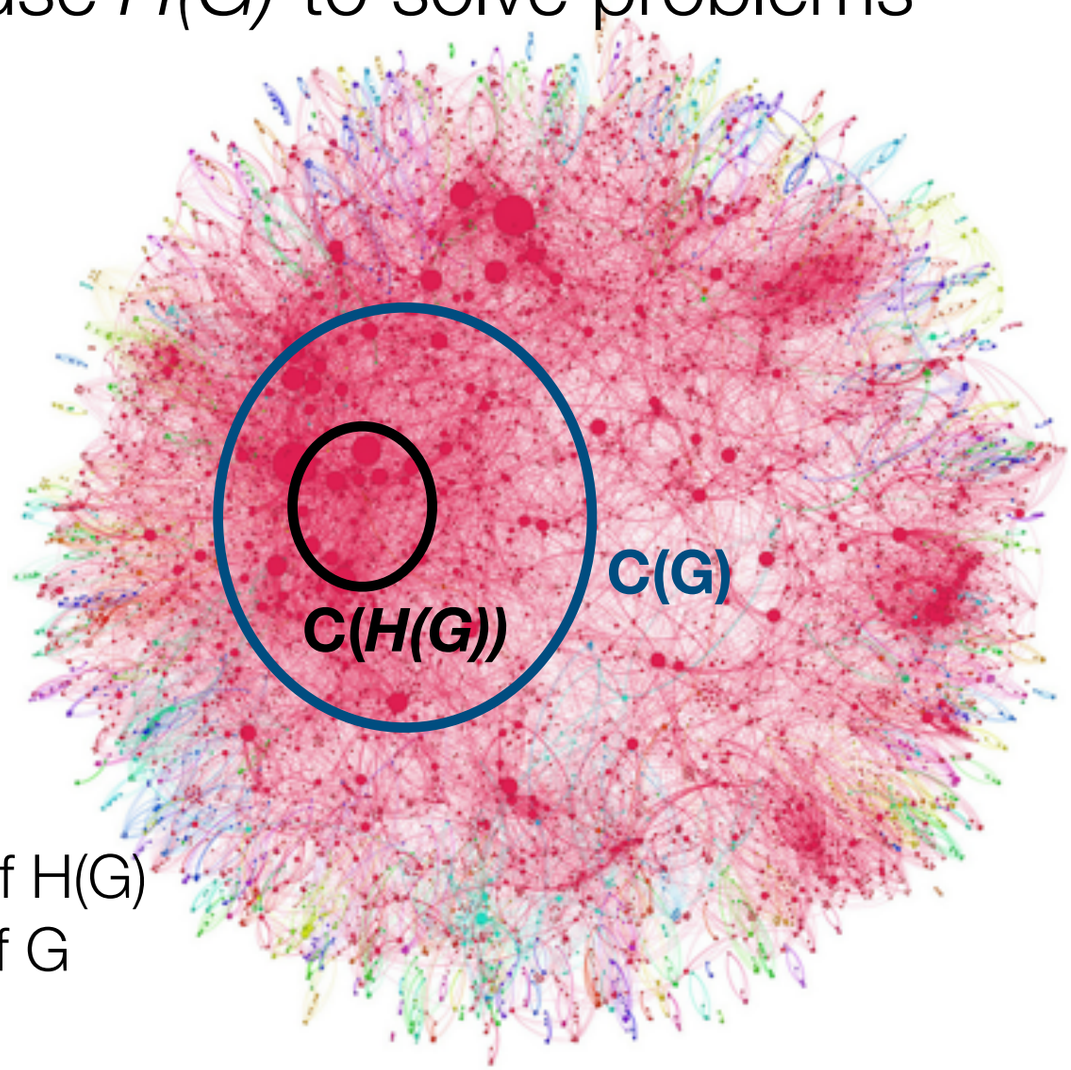
- Chordal bipartite graphs
- Chordal graphs
- Cocomparability graphs



[5] F. Dragan, H. Guarnera, A. Leitert, *Hellification of special graph classes*, manuscript in preparation.

Open Questions and Future Work

- What other graph classes can be Hellified efficiently?
- What other graph classes require exponentially many Helly vertices?
- What kind of problems can use *H(G)* to solve problems efficiently on *G?*
  - Diameter
  - Radius
  - Center



idea: use center of H(G) to find center of G