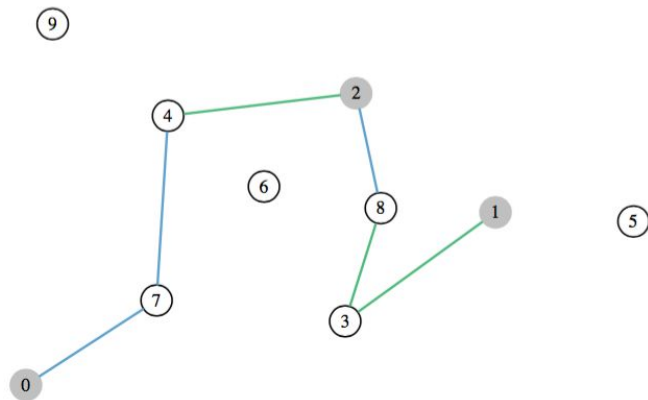
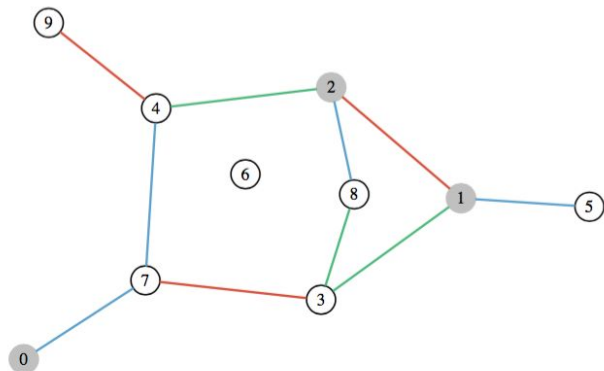


Árvore de Steiner com rotulação mínima

GRASP, VNS e GRASP/VNS

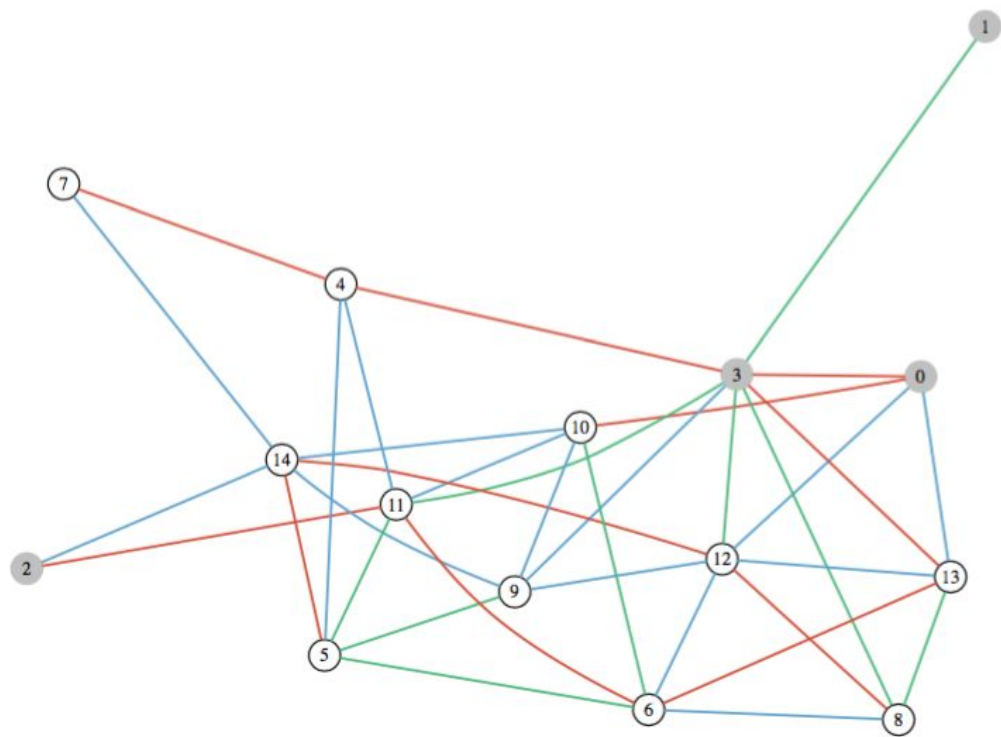
Problema



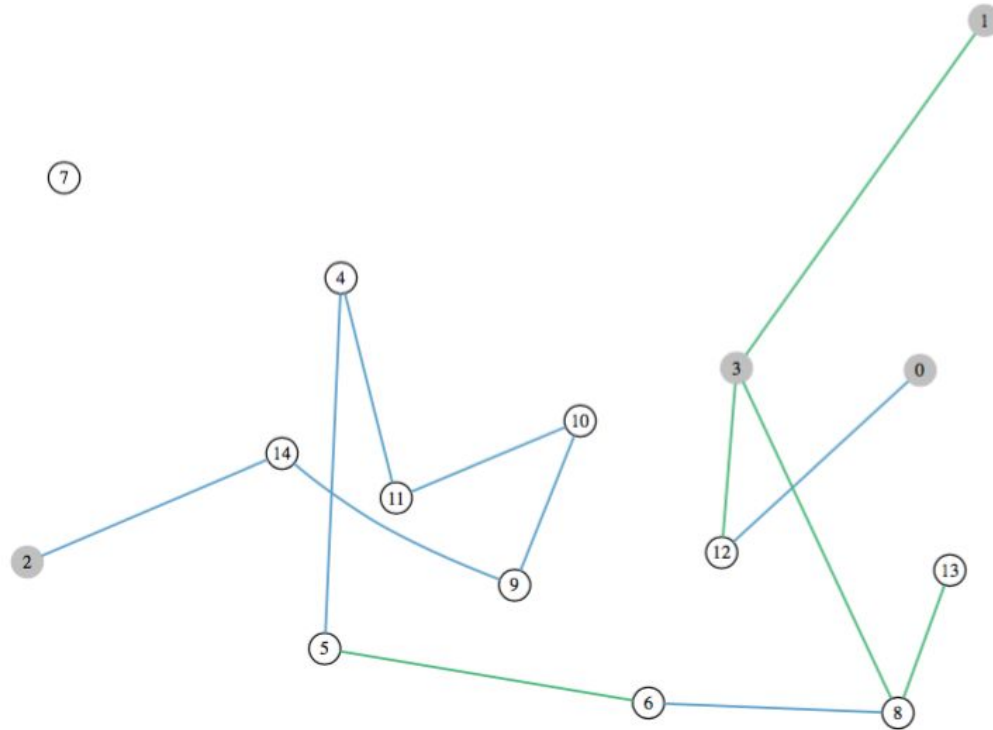
$$G = (V, E, L)$$

$$Q \subseteq V$$

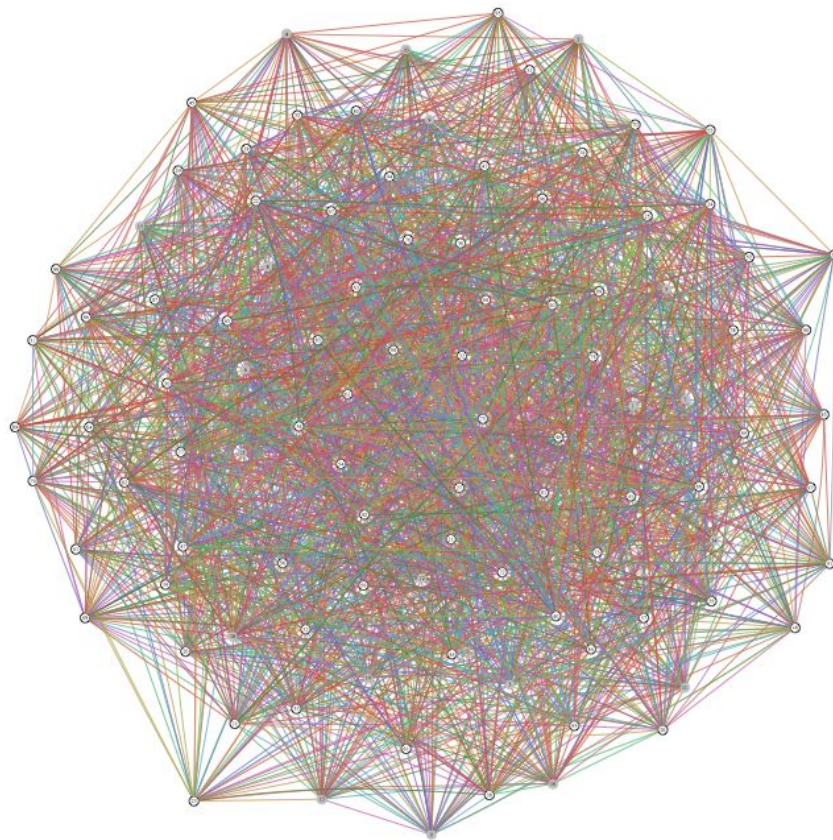
Algoritmo



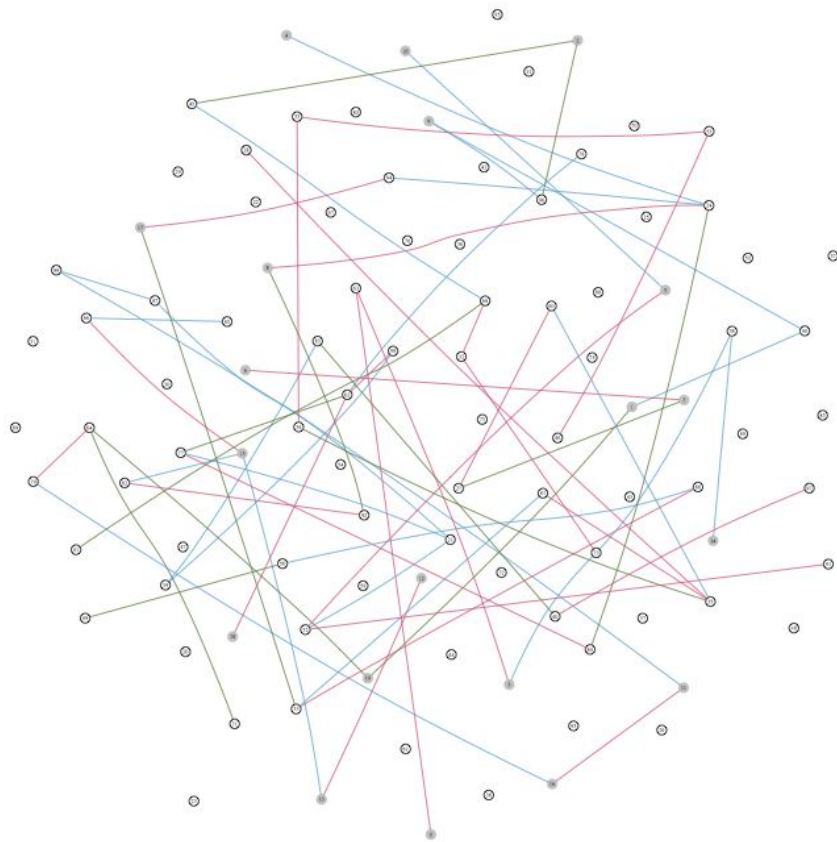
Algoritmo



Algoritmo



Algoritmo



GRASP

- Multi-inicialização
- Construção
 - RCL preenchida com $\text{argmin Comp}(C)$
- Busca local
 - Remove cores desnecessárias
 - Verifica se grafo continua

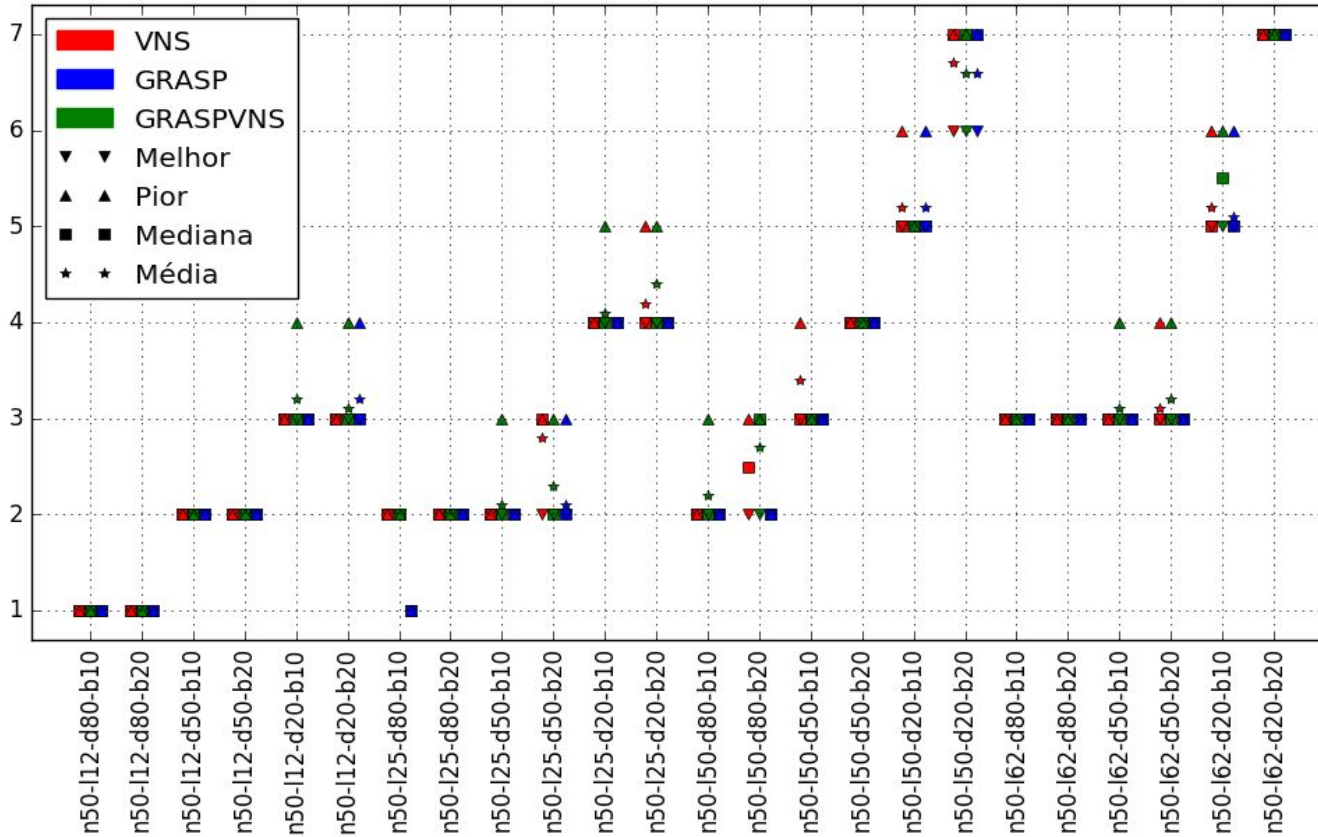
VNS

- Shaking
- Busca local

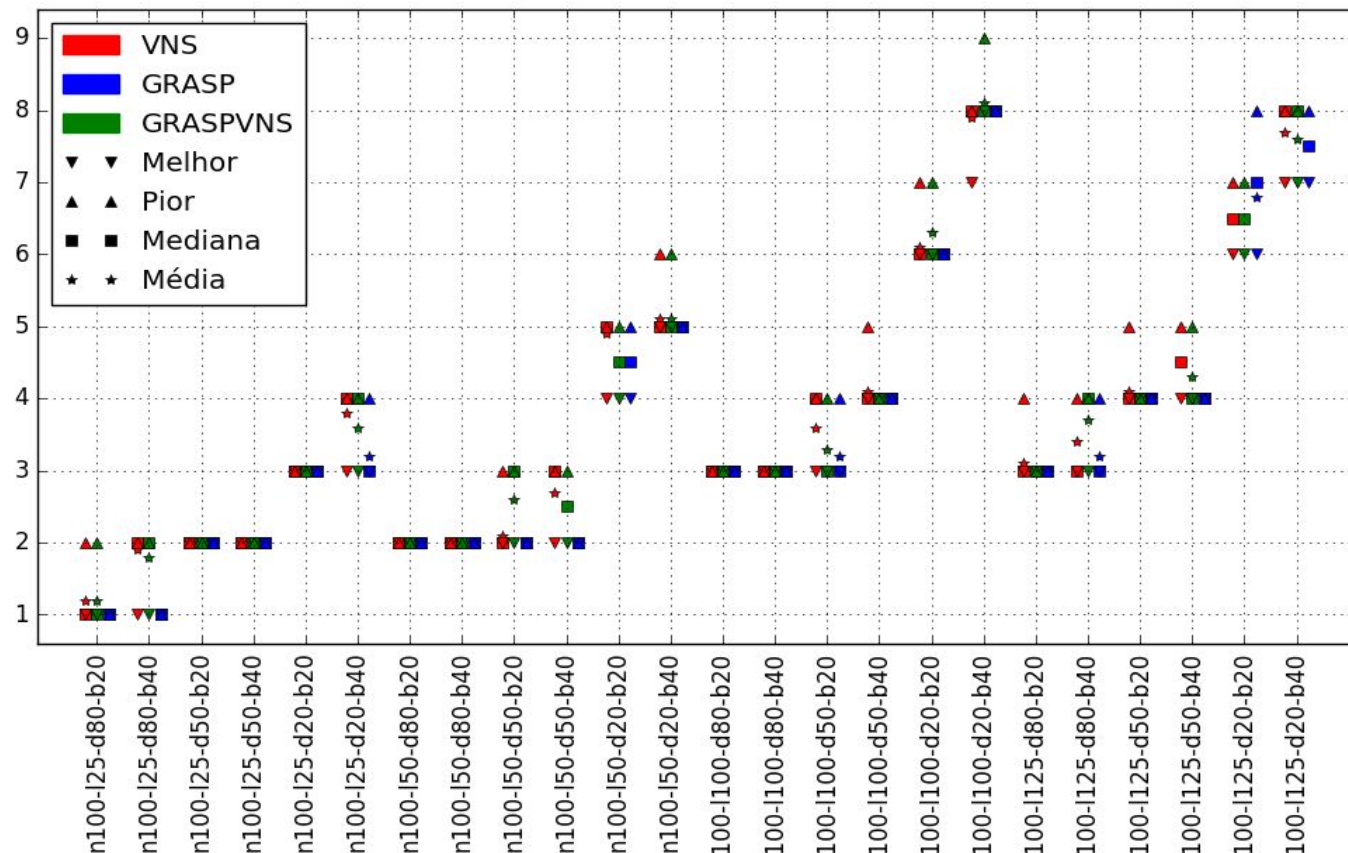
GRASP/VNS

- Construção
- VNS
 - Busca local

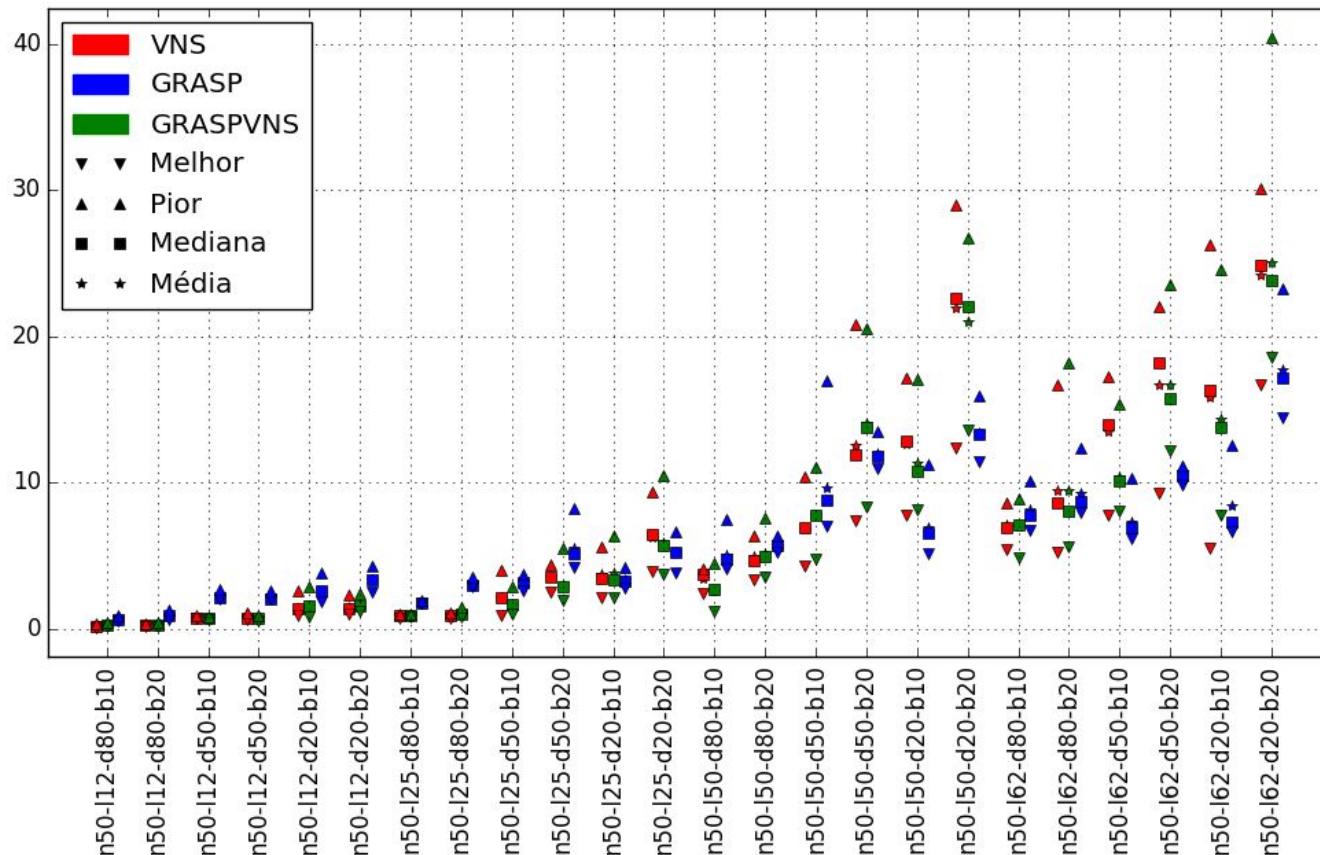
Resultados (n = 50 | solução)



Resultados (n = 100 | solução)



Resultados (n = 50 | tempo)



Resultados (n = 100 | tempo)

