Comparaison des performances du planificateur HSP et du planificateur MCTS

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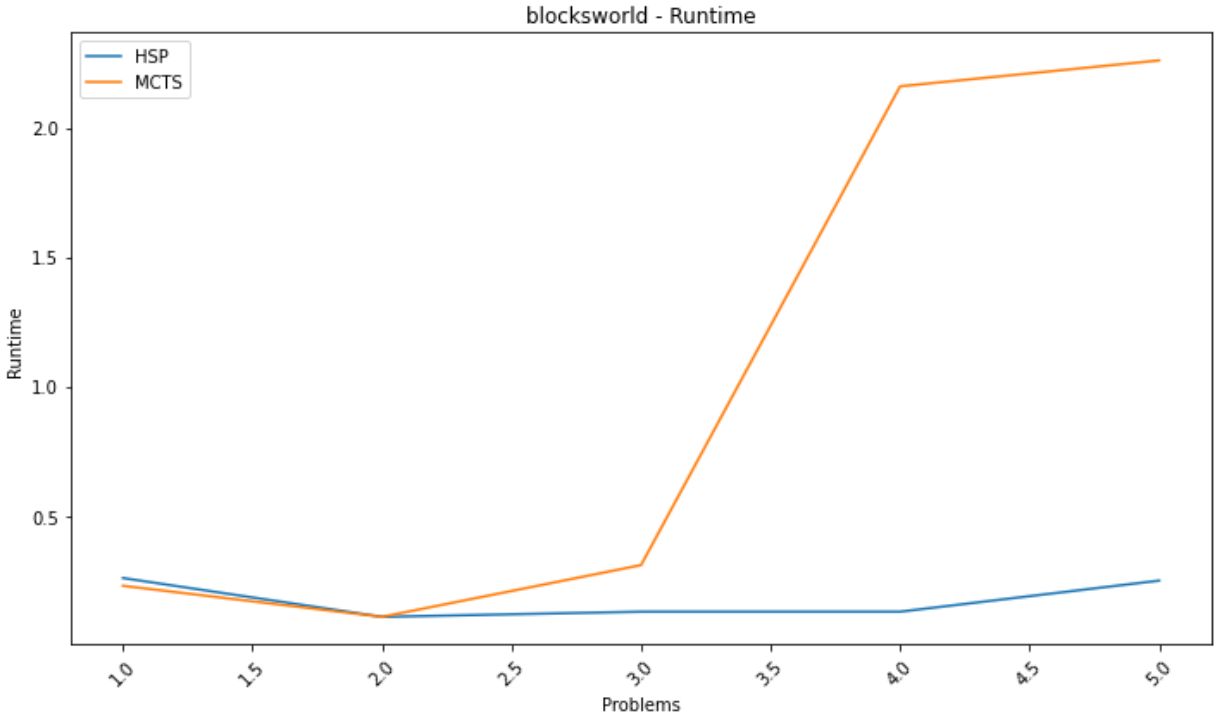
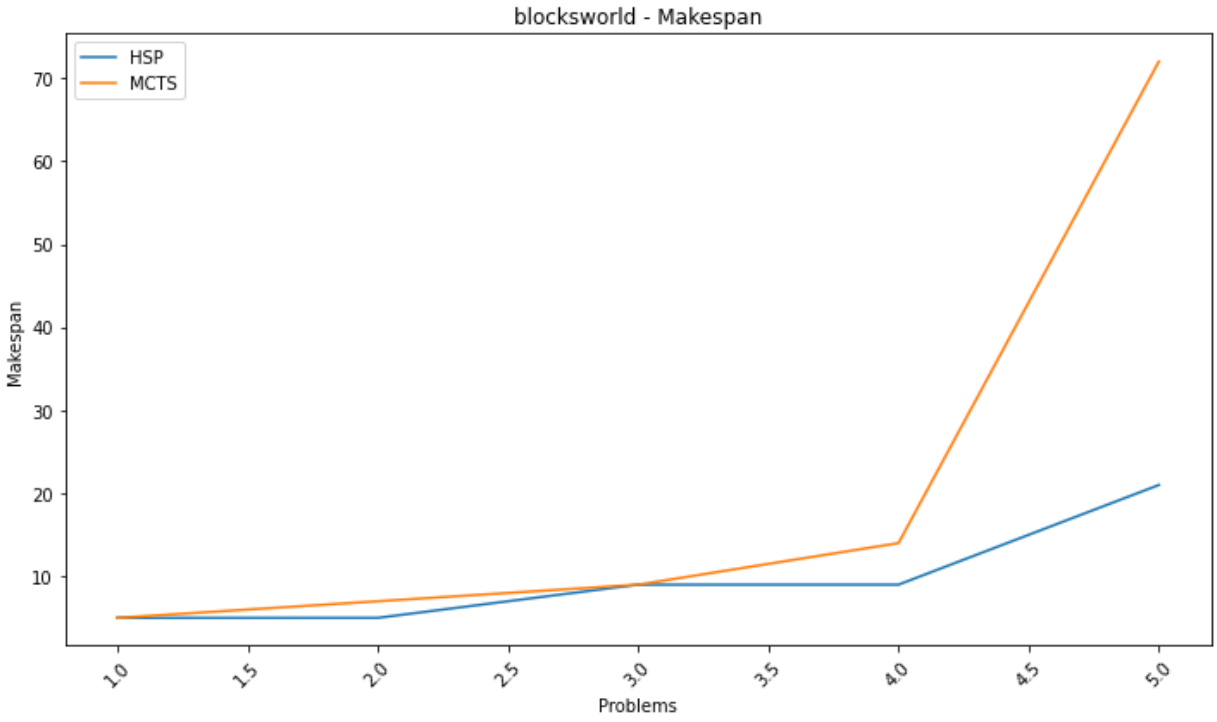
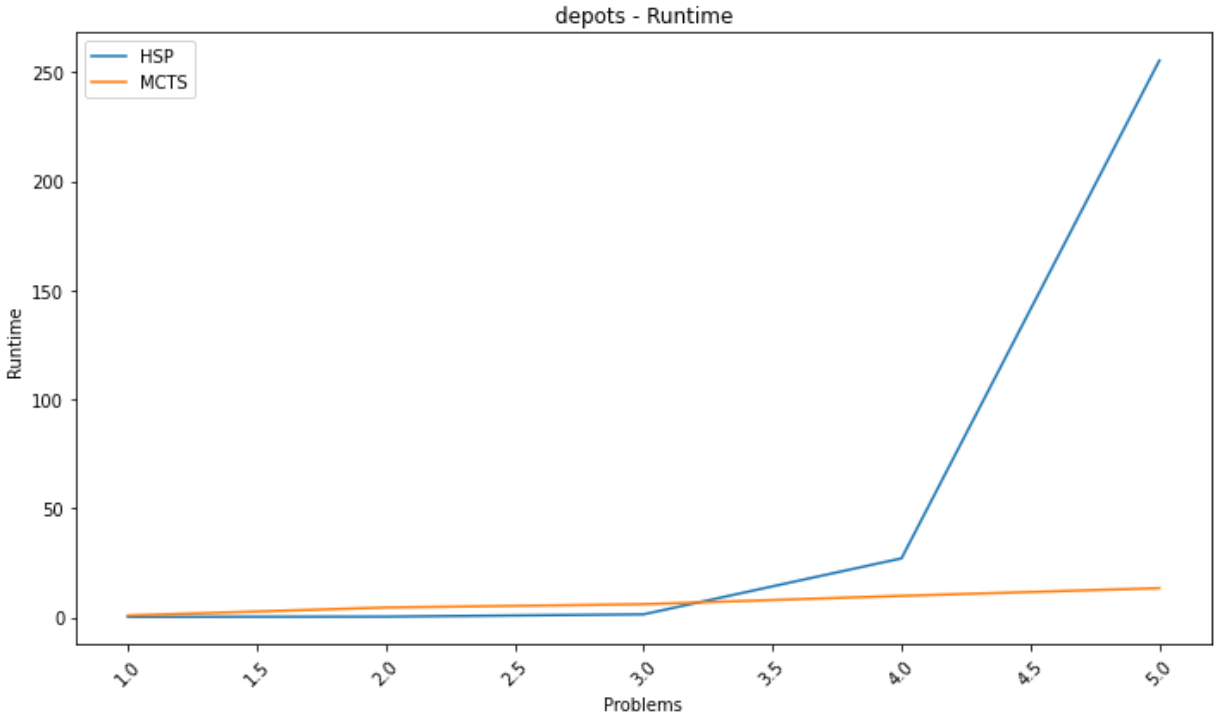
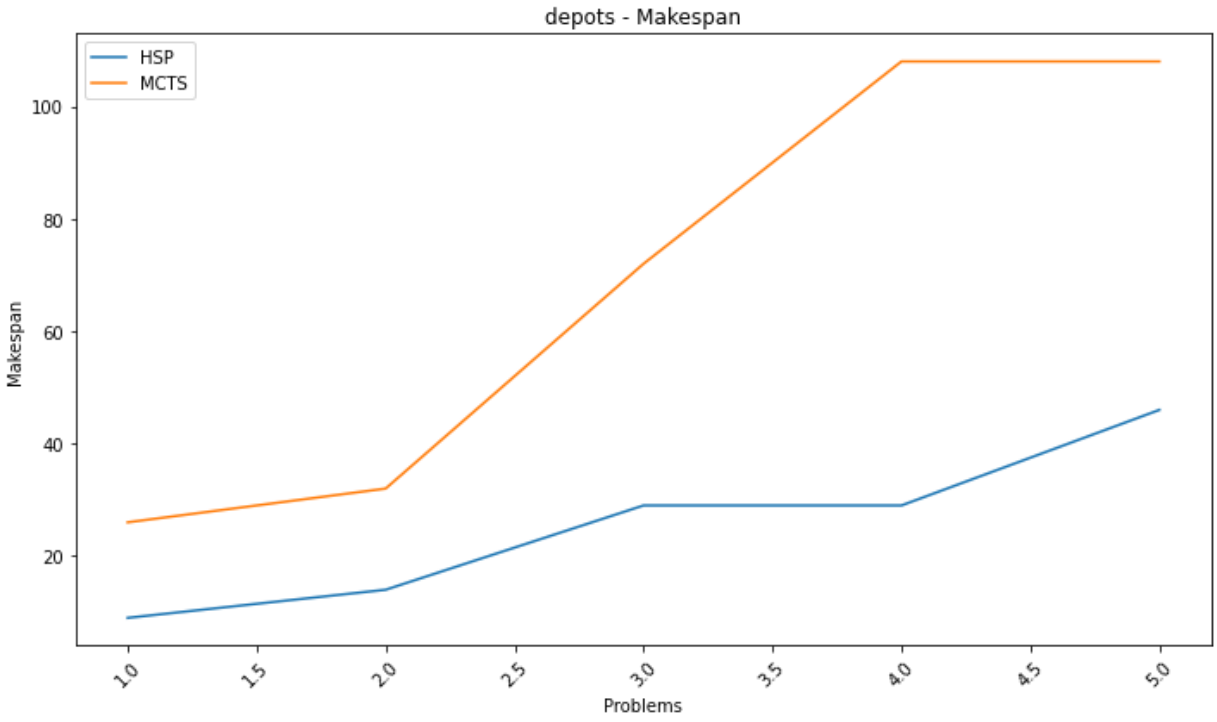
In [11]:

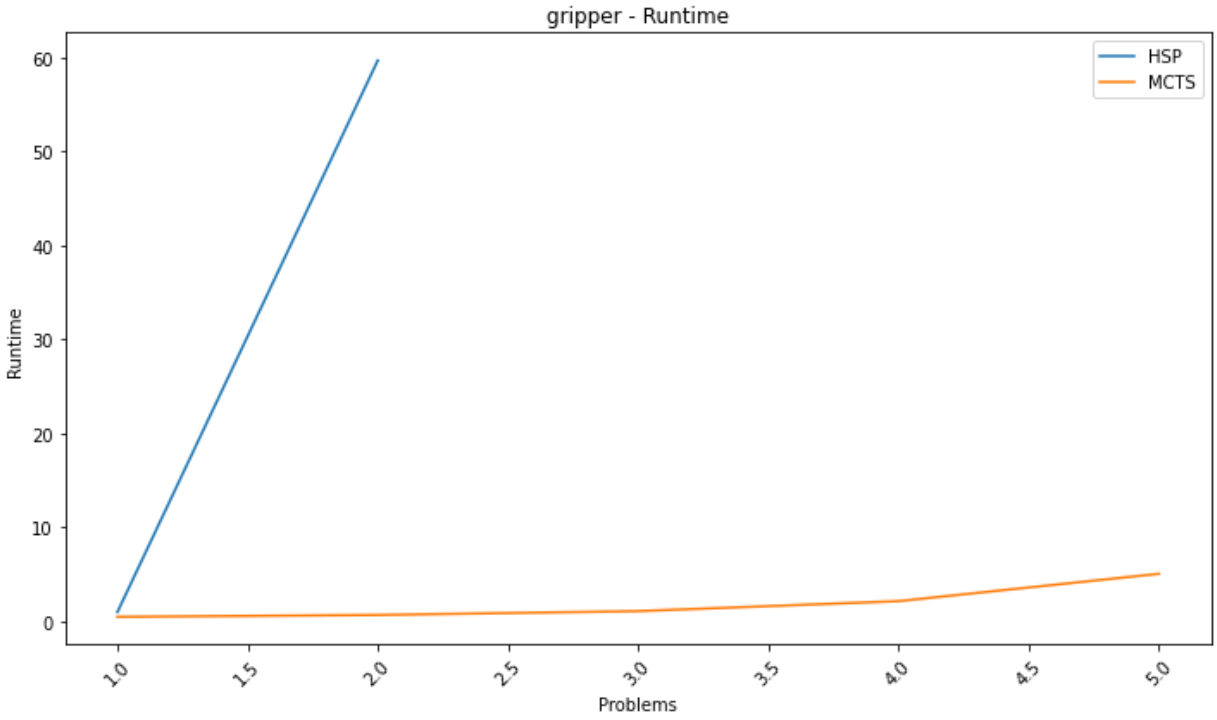
```
import pandas as pd
import matplotlib.pyplot as plt


data = pd.read_csv('data.csv')

# split the data based on Planner
hsp_data = data[data['Planner'] == 'HSP']
mcts_data = data[data['Planner'] == 'MCTS']

domains = ['blocksworld', 'depots', 'gripper', 'logistics']
metrics = ['Runtime', 'Makespan']

for domain in domains:
    hsp_domain_data = hsp_data[hsp_data['Domain'] == domain]
    mcts_domain_data = mcts_data[mcts_data['Domain'] == domain]

    for metric in metrics:
        # sort the data by problem number
        hsp_sorted = hsp_domain_data.sort_values(by='Problem')
        mcts_sorted = mcts_domain_data.sort_values(by='Problem')

        plt.figure(figsize=(10, 6))
        plt.plot(hsp_sorted['Problem'], hsp_sorted[metric], label='HSP')
        plt.plot(mcts_sorted['Problem'], mcts_sorted[metric], label='MCTS')
        plt.xlabel('Problems')
        plt.ylabel(metric)
        plt.title(f'{domain} - {metric}')
        plt.legend()
        plt.xticks(rotation=45)
        plt.tight_layout()
        plt.show()
```

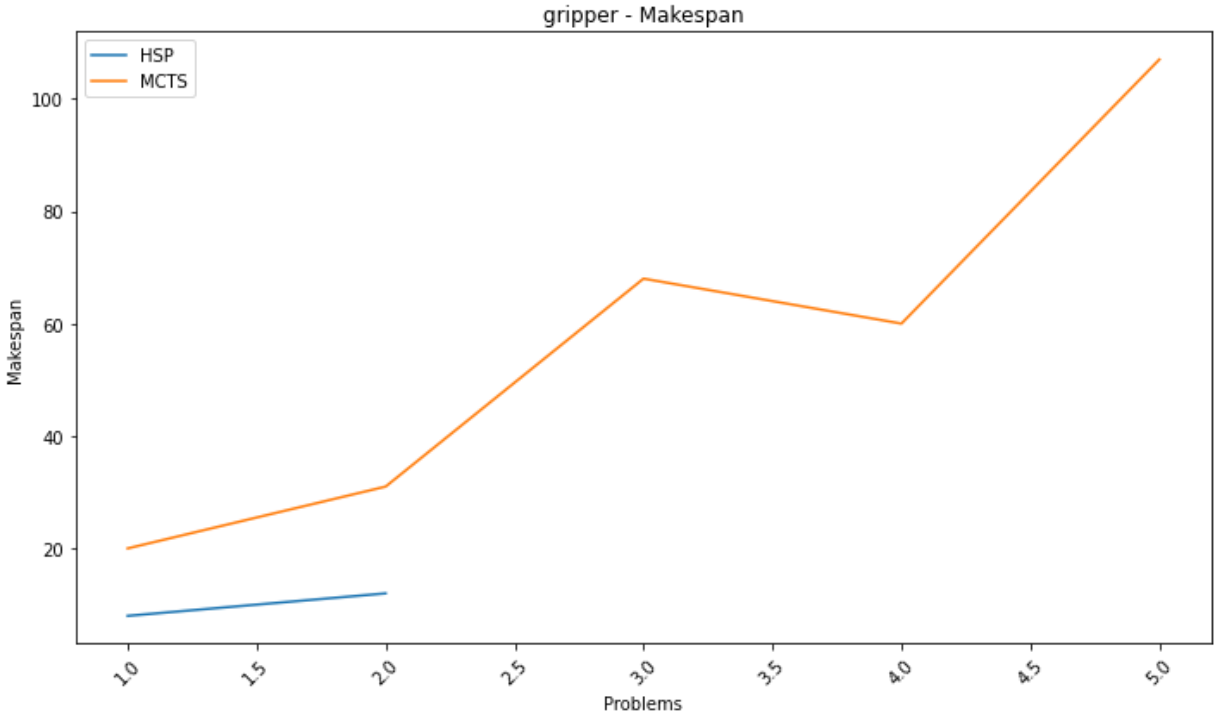

blocksworld - Runtime
HSP
MCTS
Runtime
2.0
1.5
1.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
Problems

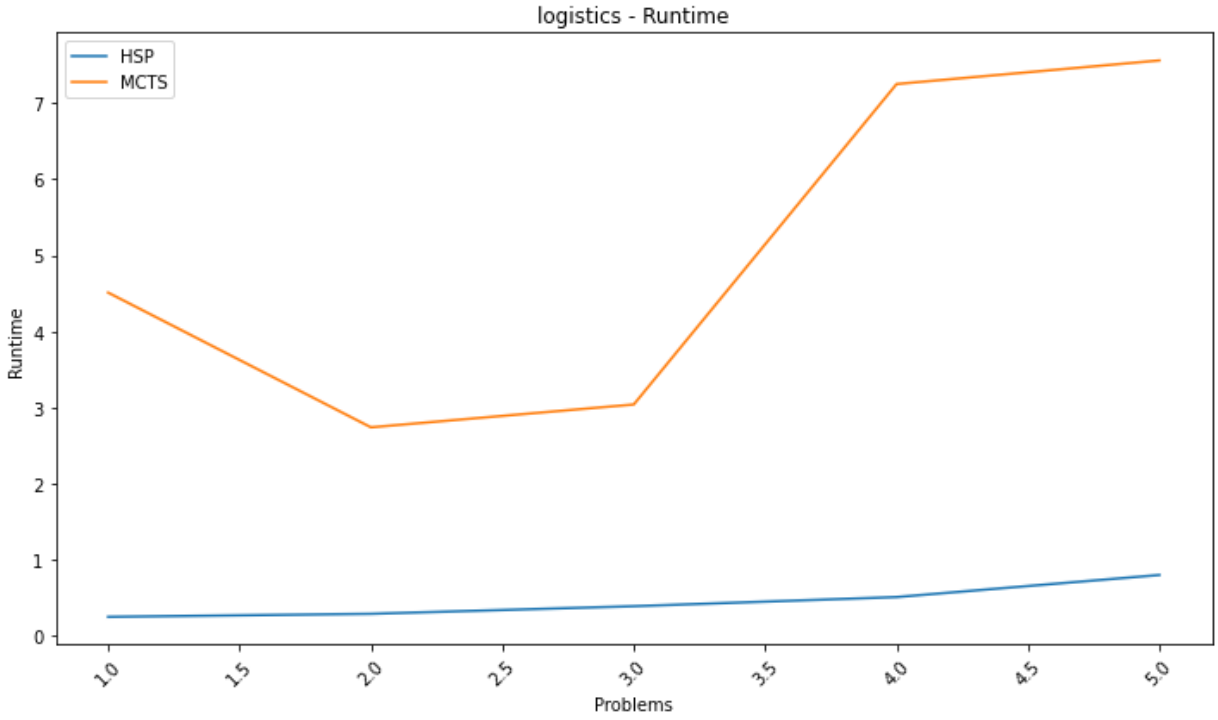

blocksworld - Makespan
HSP
MCTS
Makespan
70
60
50
40
30
20
10
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
Problems

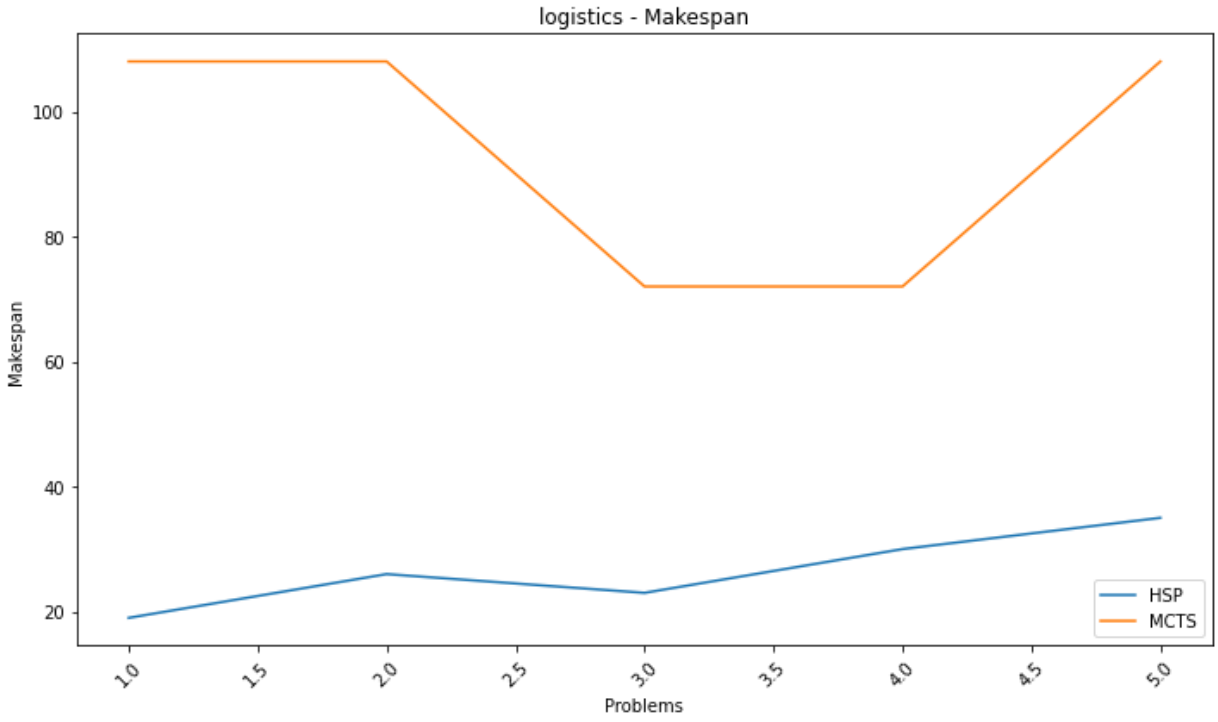

depots - Runtime
HSP
MCTS
Runtime
Problems
0
50
100
150
200
250
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


depots - Makespan
HSP
MCTS
Makespan
Problems
20
40
60
80
100
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


gripper - Runtime
HSP
MCTS
Runtime
Problems
0
10
20
30
40
50
60
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


gripper - Makespan
HSP
MCTS
Makespan
Problems
20
40
60
80
100
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


logistics - Runtime
HSP
MCTS
Runtime
Problems
0
1
2
3
4
5
6
7
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


logistics - Makespan
HSP
MCTS
Makespan
Problems
20
40
60
80
100
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0