

Best-of-n

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1 $n = 10$ and 3000 iteration with 200 agents

Grid : $Q = \text{'H0':1, 'H1': 12, 'H2': 7, 'H3': 8, 'H4': 6, 'H5': 3, 'H6': 2, 'H7': 4, 'H8':5, 'H9':1}$
Time used: 270 s

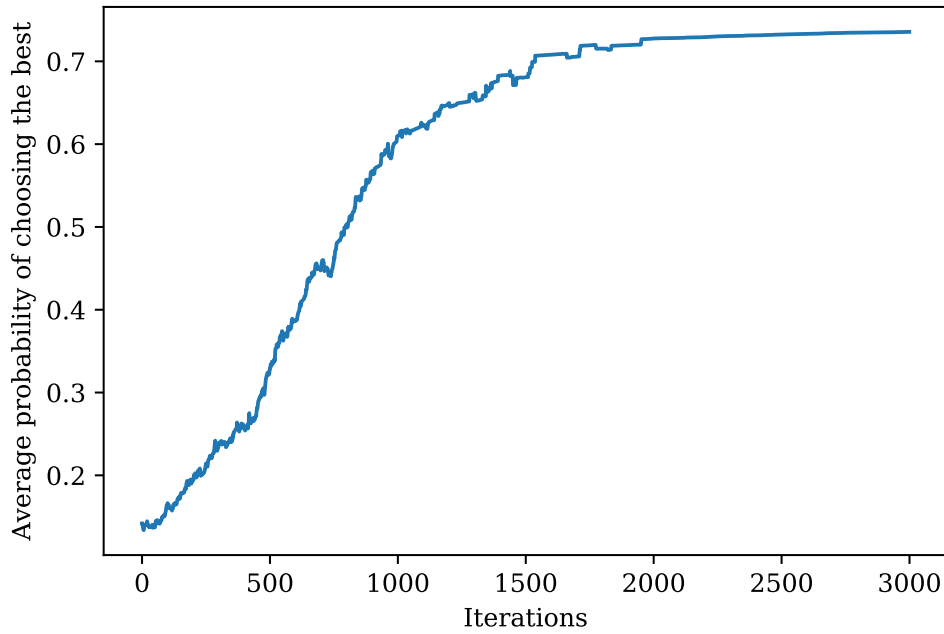


Figure 1: Probability for choosing the best against iteration time, average of 100 time run

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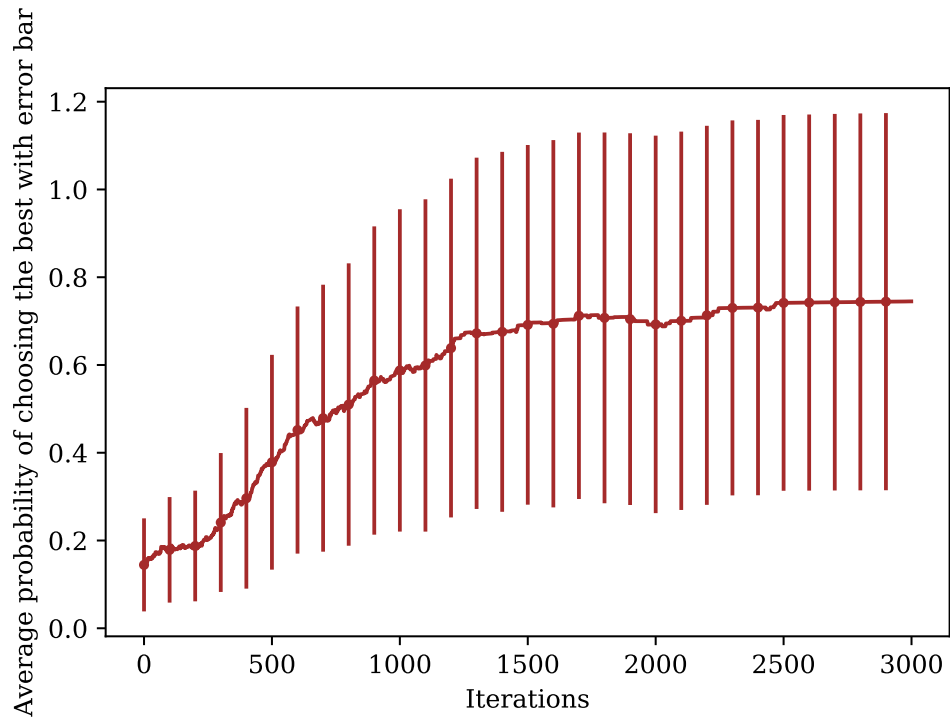


Figure 2: Probability for choosing the best against iteration time, average of 100 time run, with error bar

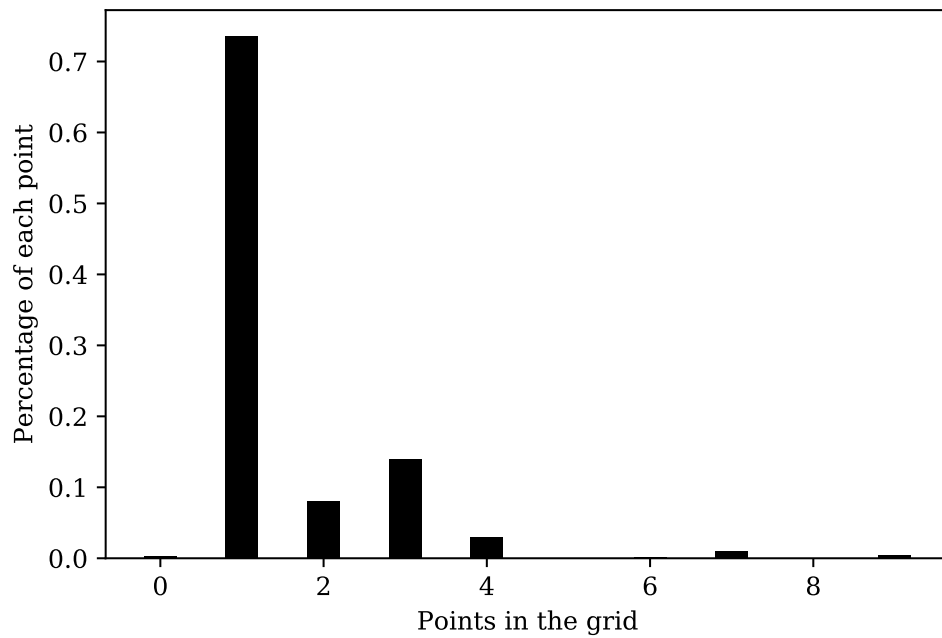


Figure 3: percentage of converging to the best, average of 100 time run, Histogram

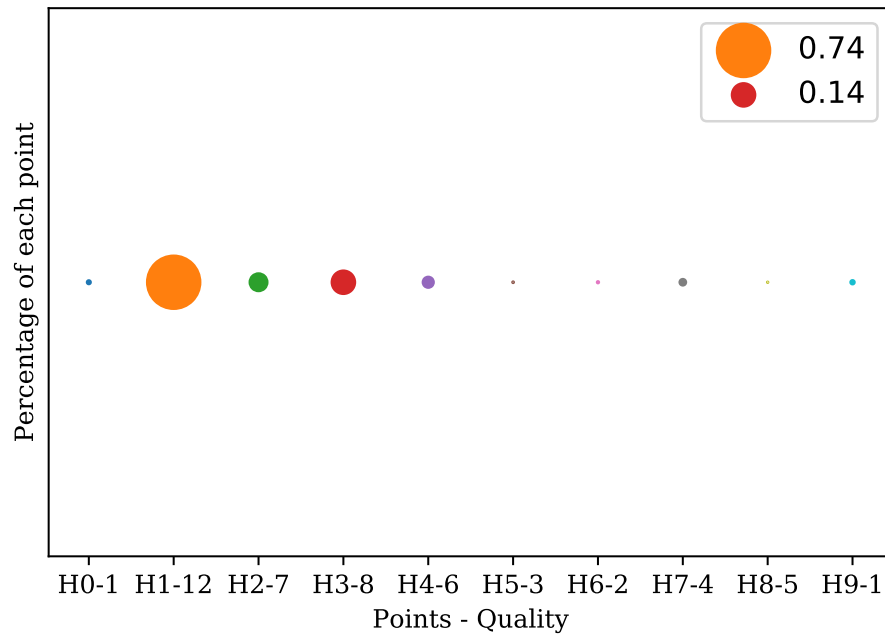


Figure 4: average percentage average of choosing to the best, average of 100 time run, circle

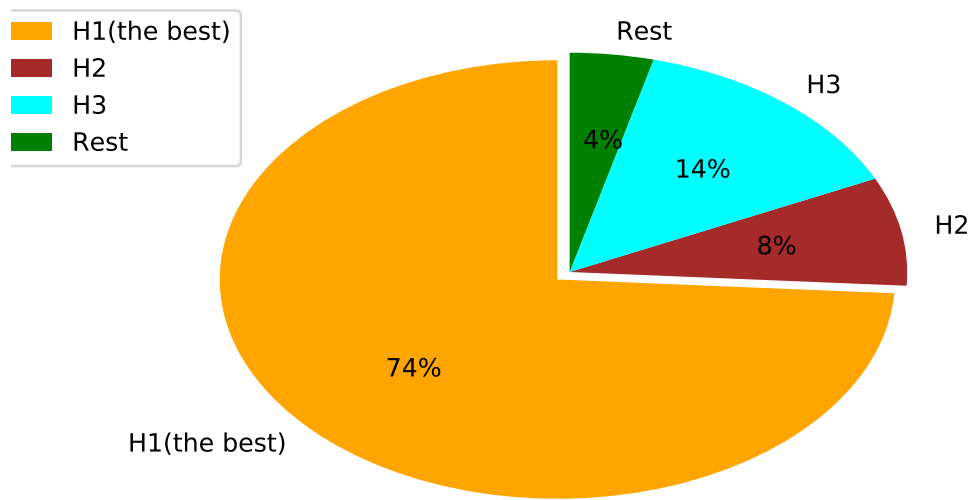


Figure 5: percentage of converging to the best, average of 100 time run, pie

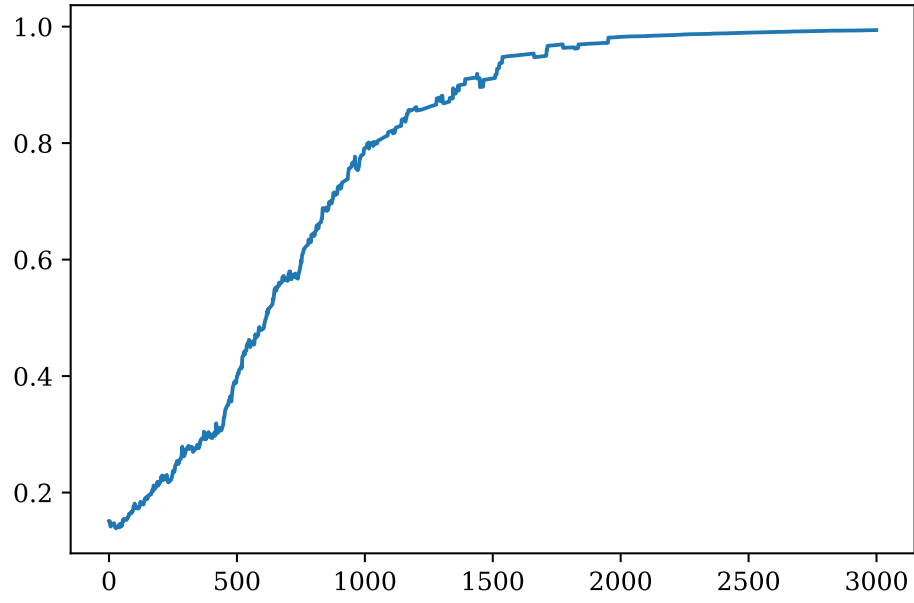


Figure 6: Probability for choosing the best against iteration time, average of 100 time run, only when converge to the best of $n(H1)$

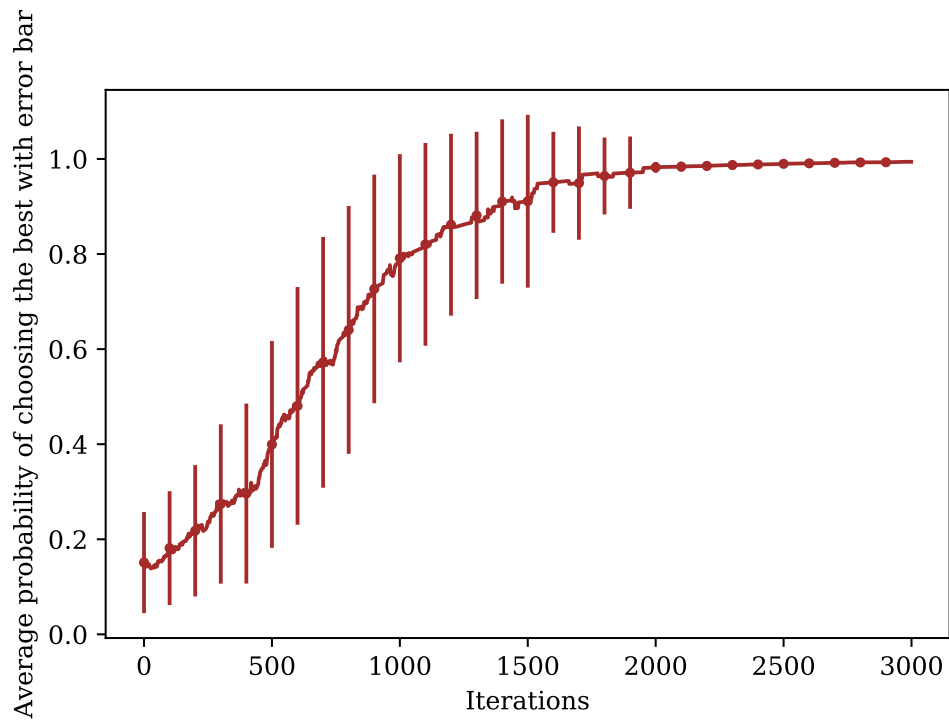


Figure 7: Probability for choosing the best against iteration time, average of 100 time run, only when converge to the best of $n(H1)$, with error bar

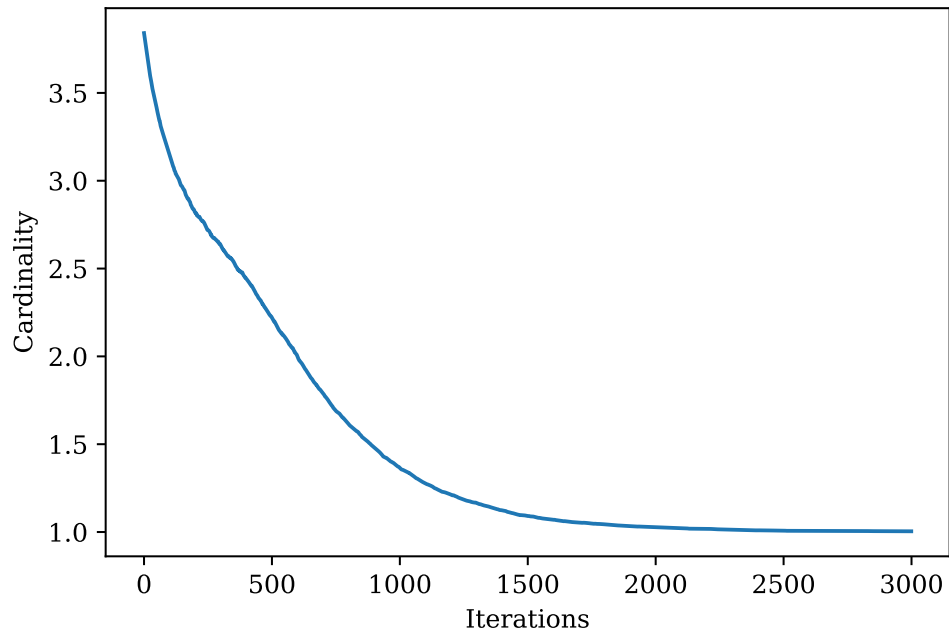


Figure 8: Cardinality against iteration time, average of 100 time run

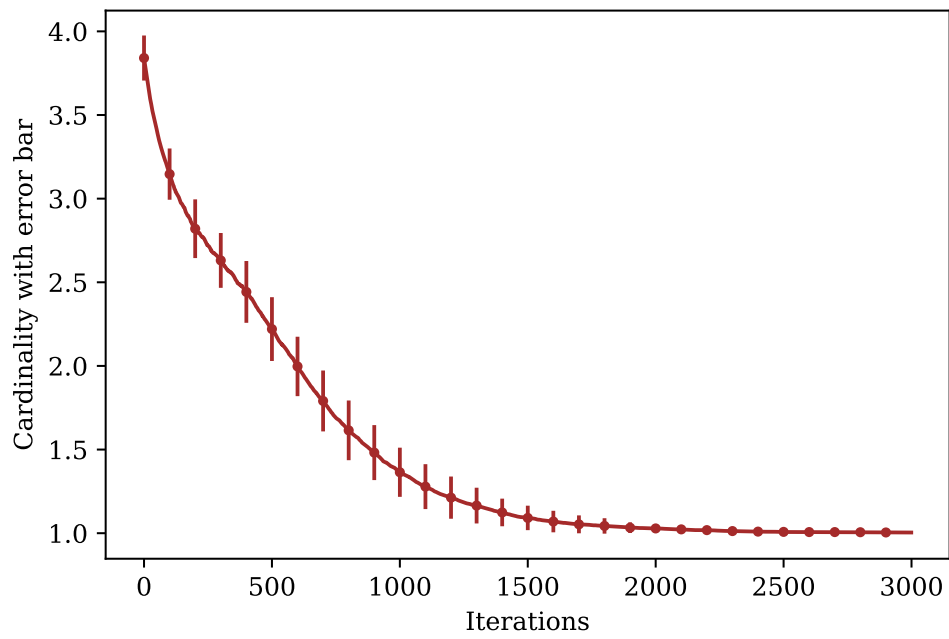


Figure 9: Cardinality against iteration time, average of 100 time run, with error bar

2 $n = 10$ and 3000 iteration with 200 agents which are picked based on squared rank

2.1 100 times experiments

Grid : $Q = \{ 'H0':1, 'H1': 12, 'H2': 7, 'H3': 8, 'H4': 6, 'H5': 3, 'H6': 2, 'H7': 4, 'H8':5, 'H9':1 \}$
The probability was determined by the square of rank of points' qualities. Time used: 364 s

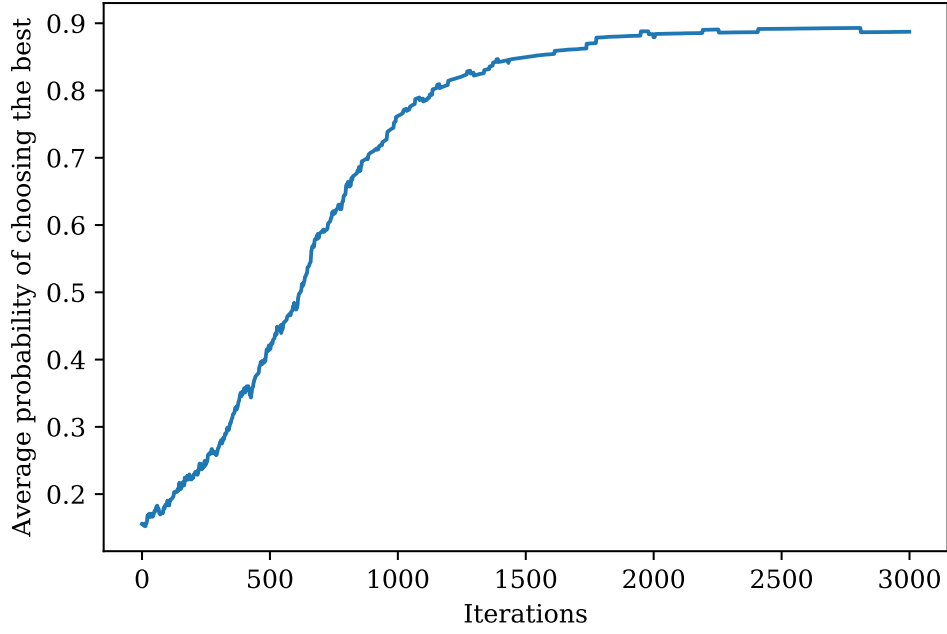


Figure 10: Probability for choosing the best against iteration time, average of 100 time run

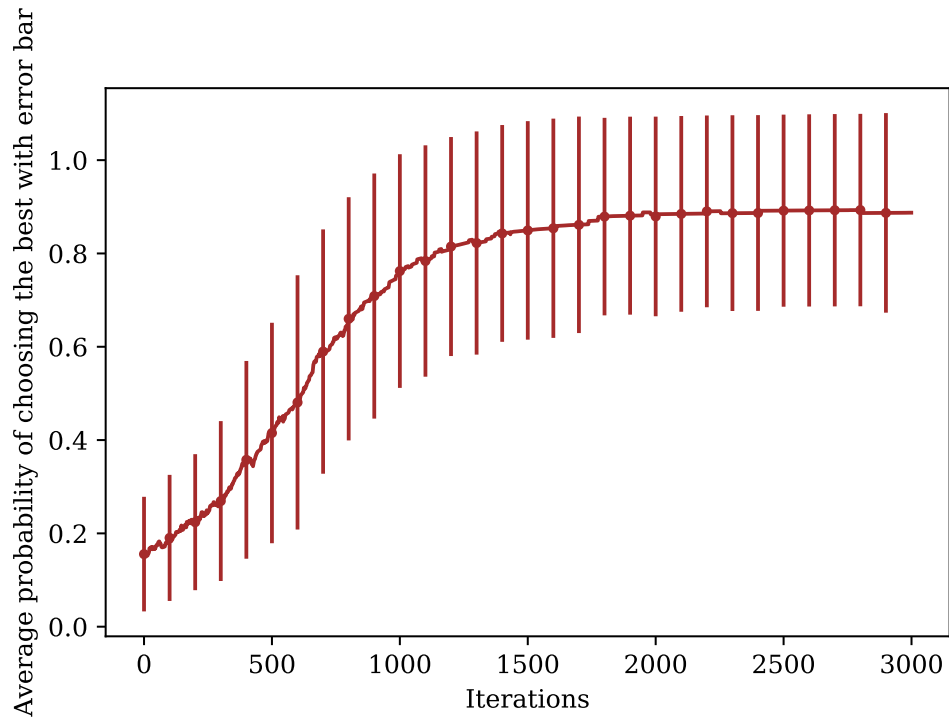


Figure 11: Probability for choosing the best against iteration time, average of 100 time run, with error bar

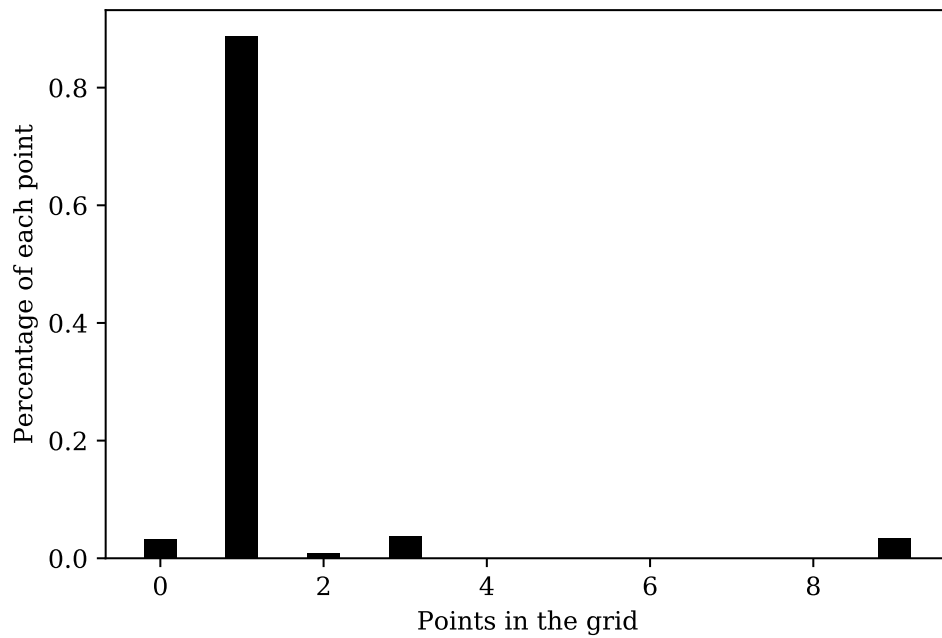


Figure 12: percentage of converging to the best, average of 100 time run, Histogram

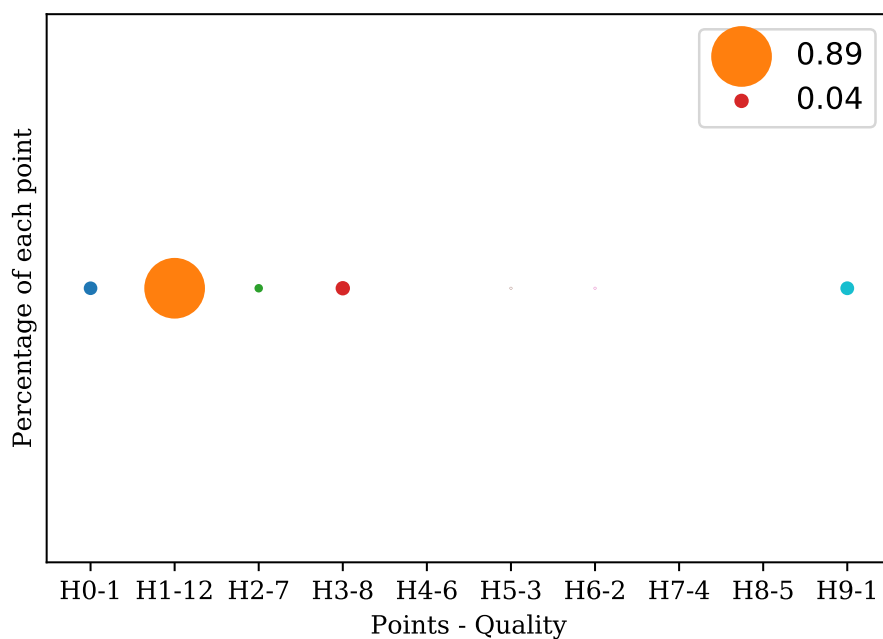


Figure 13: average percentage average of choosing to the best, average of 100 time run, circle

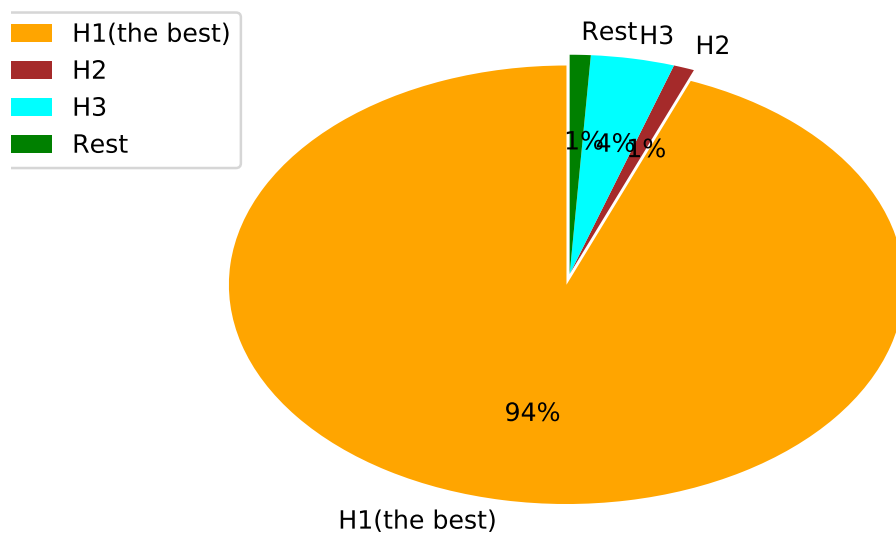


Figure 14: percentage of converging to the best, average of 100 time run, pie

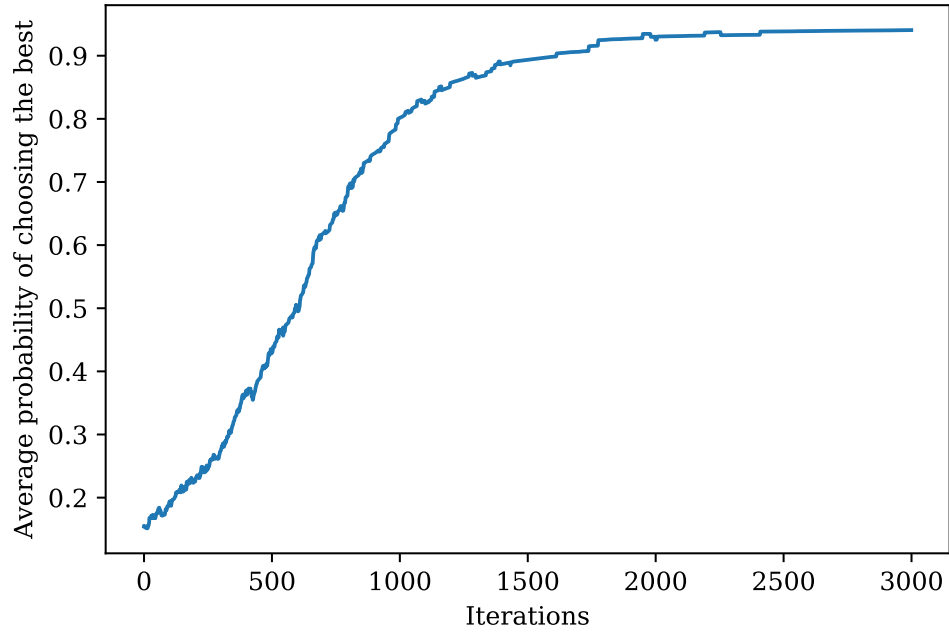


Figure 15: Probability for choosing the best against iteration time, average of 100 time run, only when converge to the best of $n(H1)$

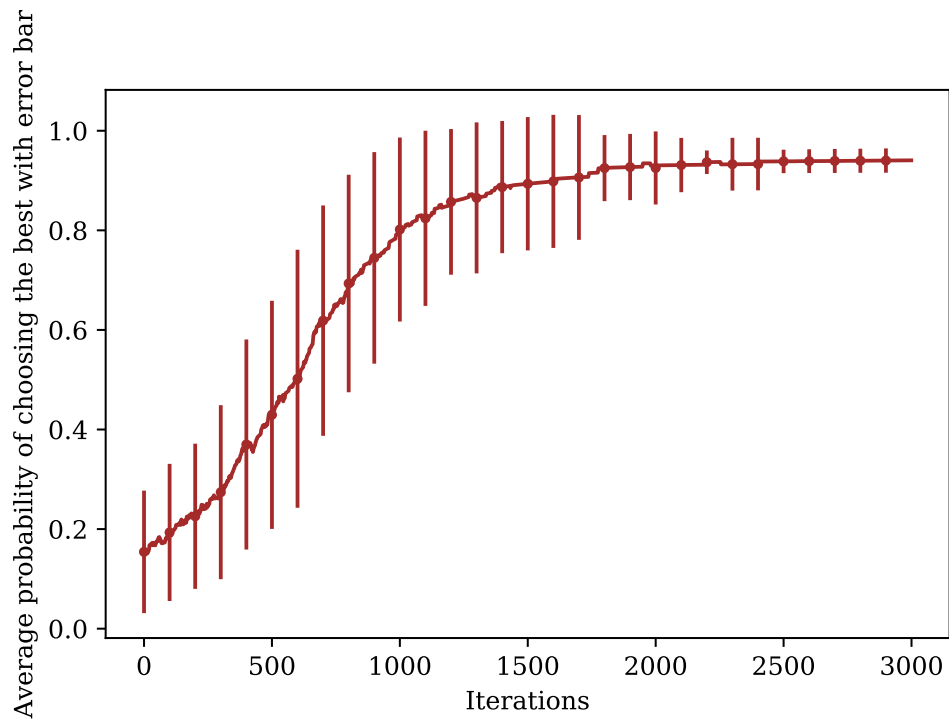


Figure 16: Probability for choosing the best against iteration time, average of 100 time run, only when converge to the best of $n(H1)$, with error bar

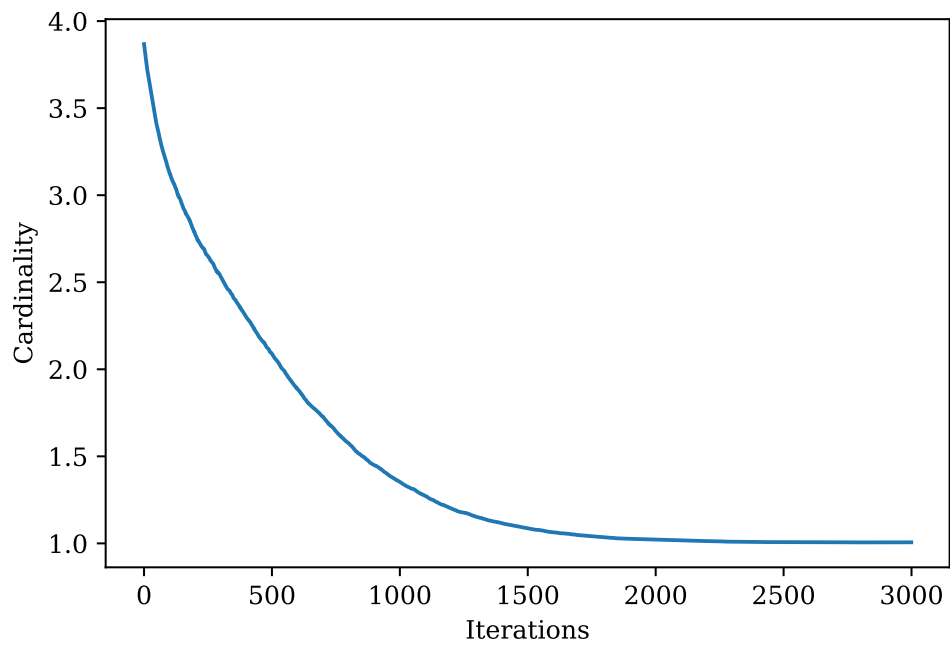


Figure 17: Cardinality against iteration time, average of 100 time run

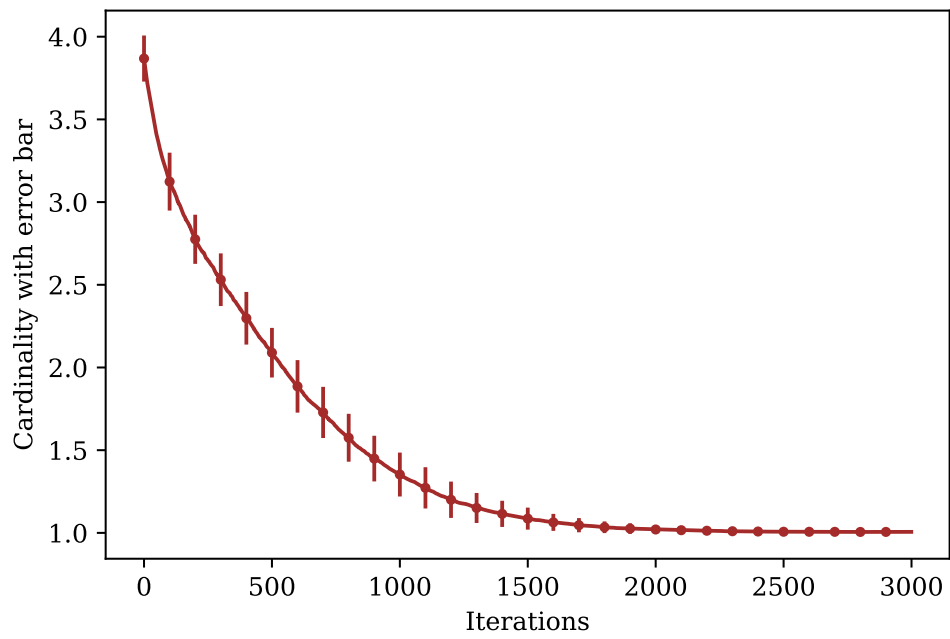


Figure 18: Cardinality against iteration time, average of 100 time run, with error bar

2.2 500 times experiments

Time used: 1813.9 s

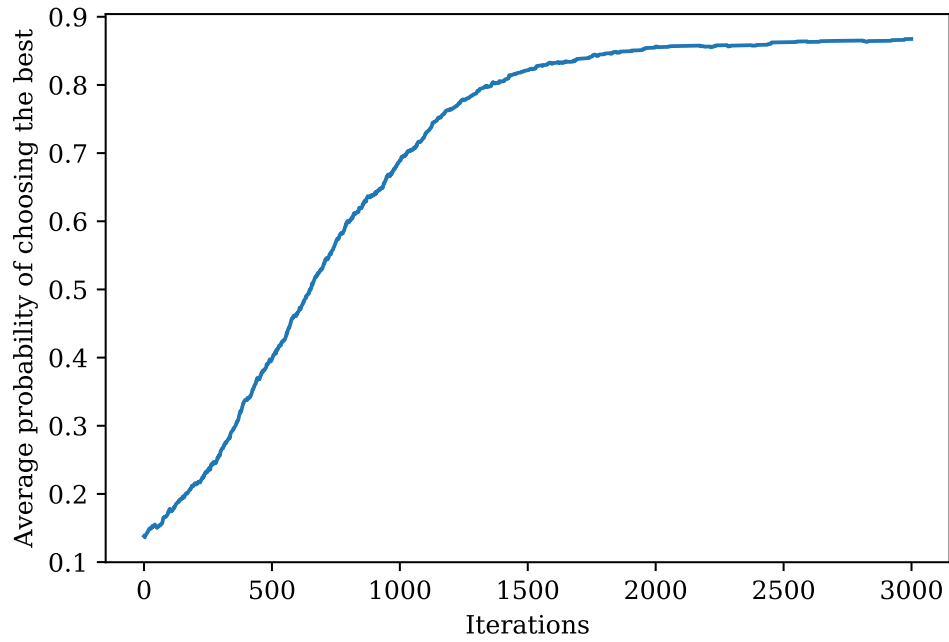


Figure 19: Probability for choosing the best against iteration time, average of 500 time run

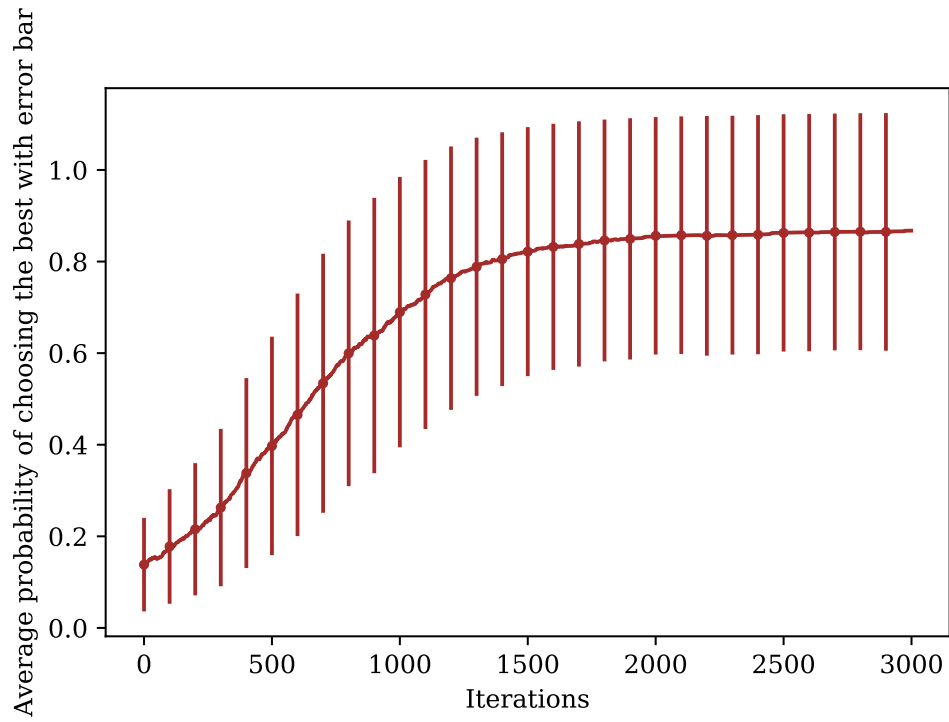


Figure 20: Probability for choosing the best against iteration time, average of 500 time run, with error bar

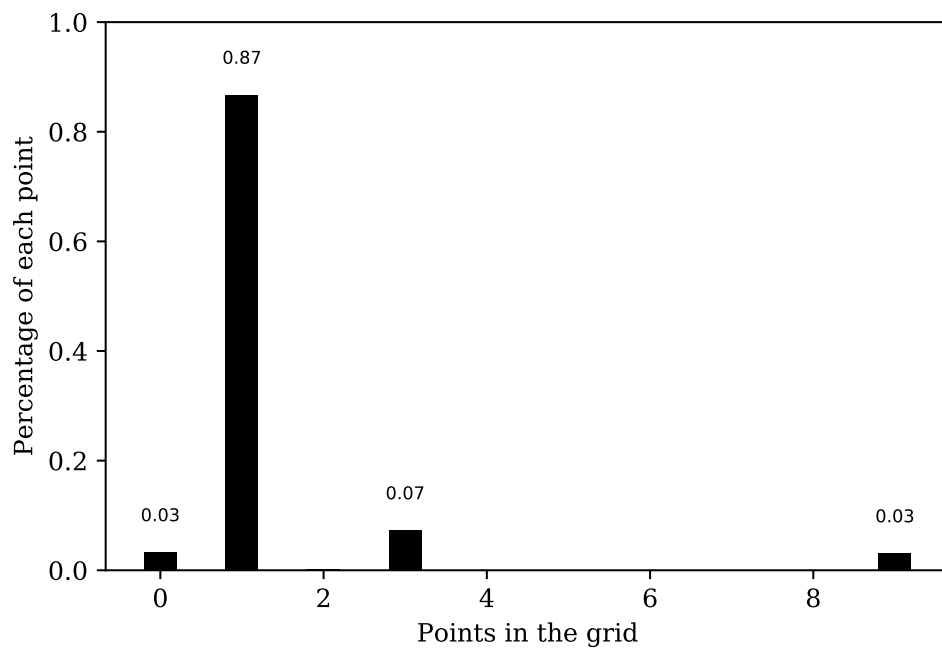


Figure 21: percentage of converging to the best, average of 500 time run, Histogram

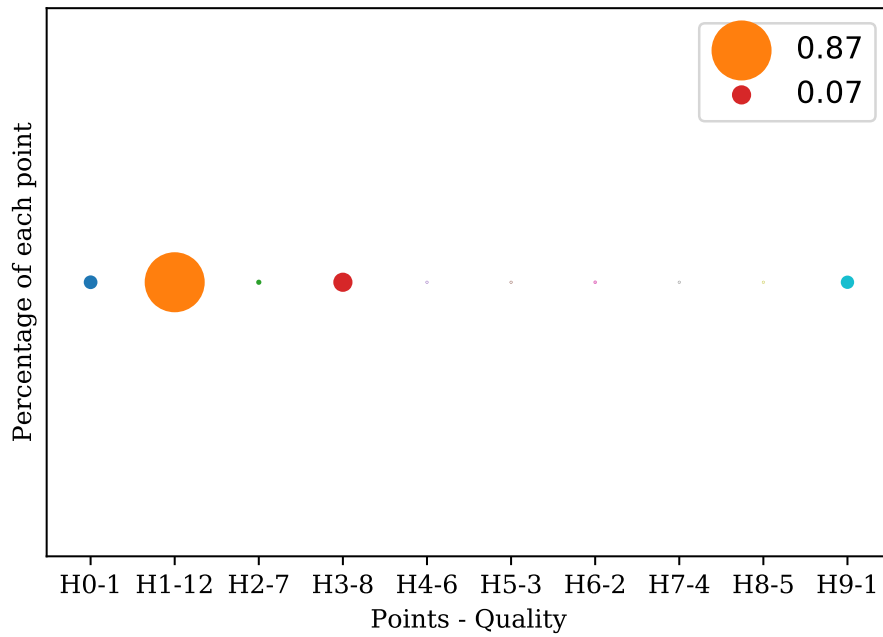


Figure 22: average percentage average of choosing to the best, average of 500 time run, circle

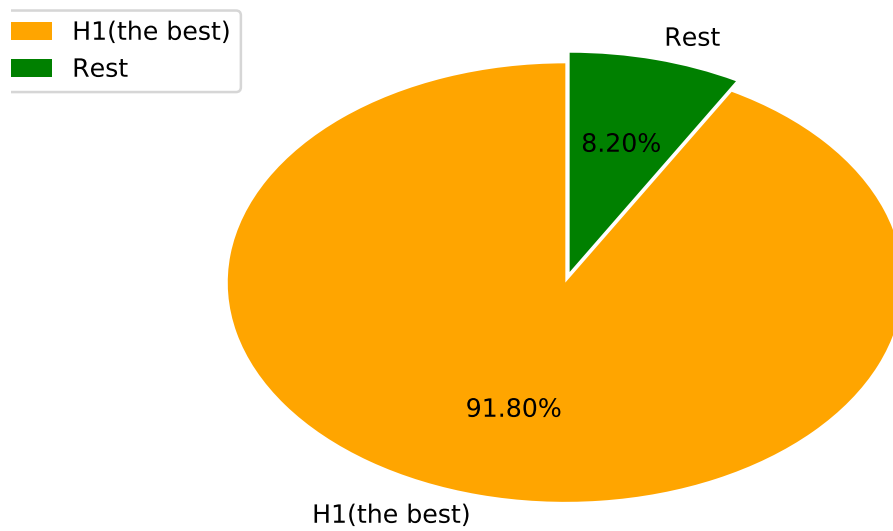


Figure 23: percentage of converging to the best, average of 500 time run, pie

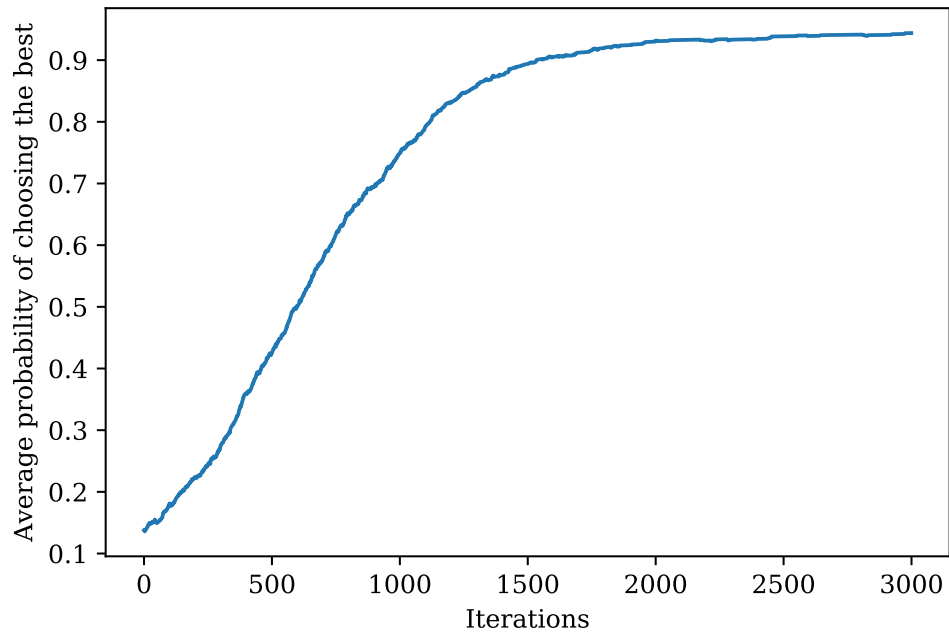


Figure 24: Probability for choosing the best against iteration time, average of 500 time run, only when converge to the best of $n(H1)$

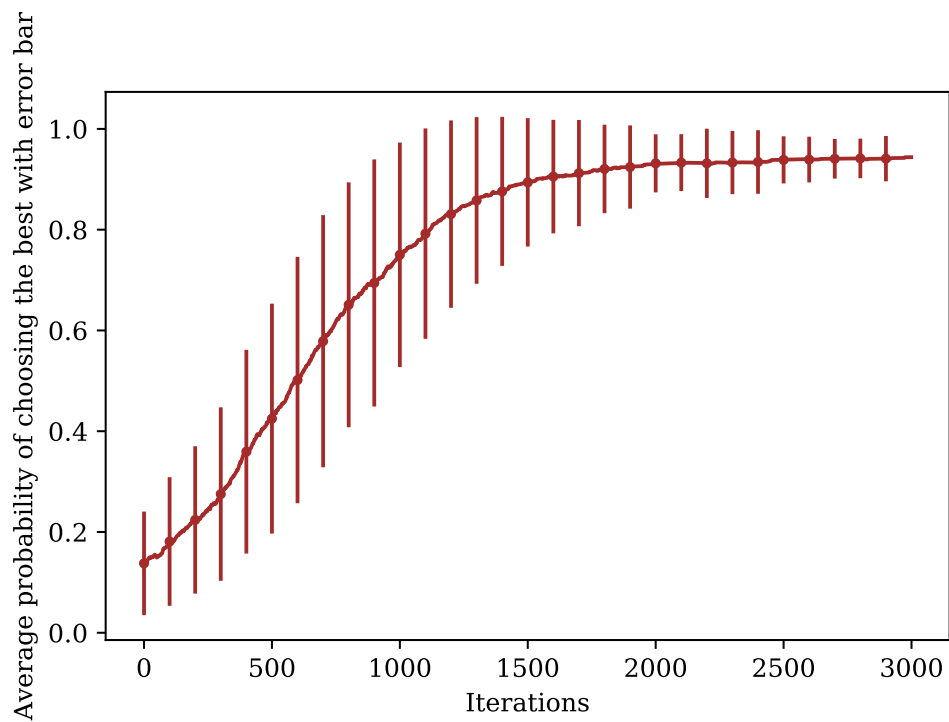


Figure 25: Probability for choosing the best against iteration time, average of 500 time run, only when converge to the best of $n(H1)$, with error bar

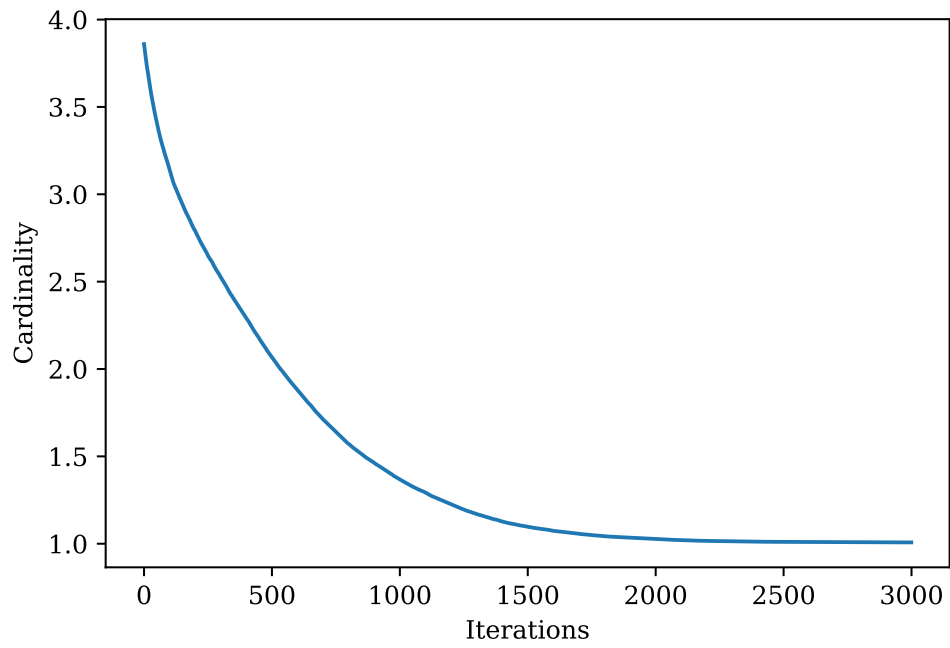


Figure 26: Cardinality against iteration time, average of 500 time run

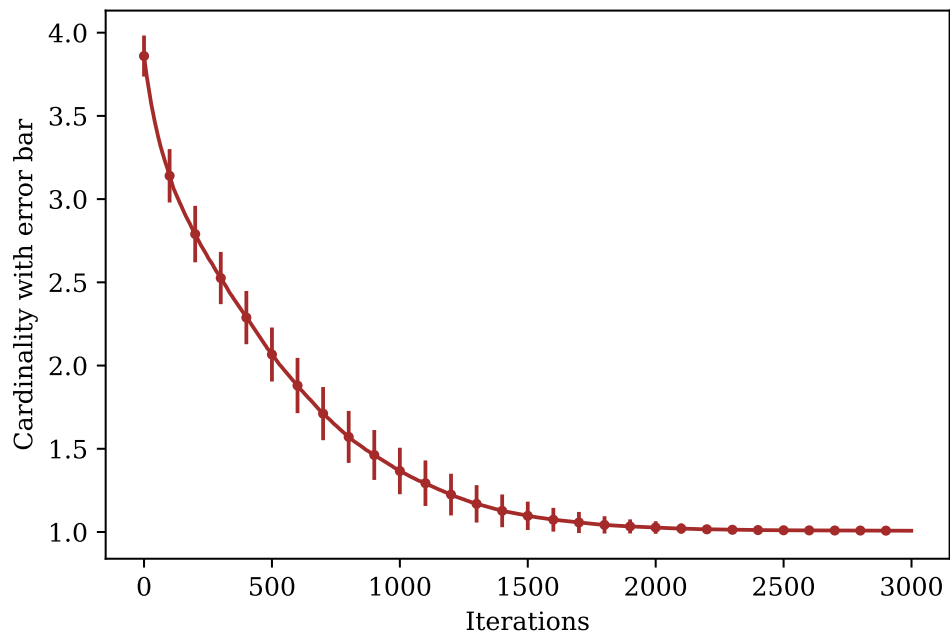


Figure 27: Cardinality against iteration time, average of 500 time run, with error bar

2.3 Toss coin initialising, 100 times experiments

Grid : $Q = \{ 'H0':1, 'H1': 12, 'H2': 7, 'H3': 8, 'H4': 6, 'H5': 3, 'H6': 2, 'H7': 4, 'H8':5, 'H9':1 \}$
The probability was determined by the square of rank of points' qualities. Time used:
forget to record

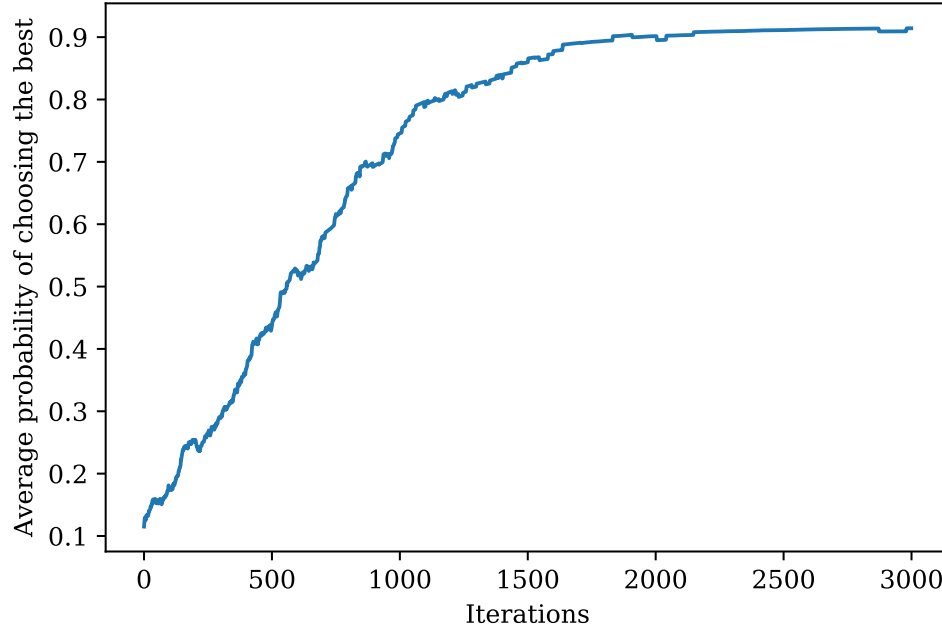


Figure 28: Probability for choosing the best against iteration time, average of 100 time run

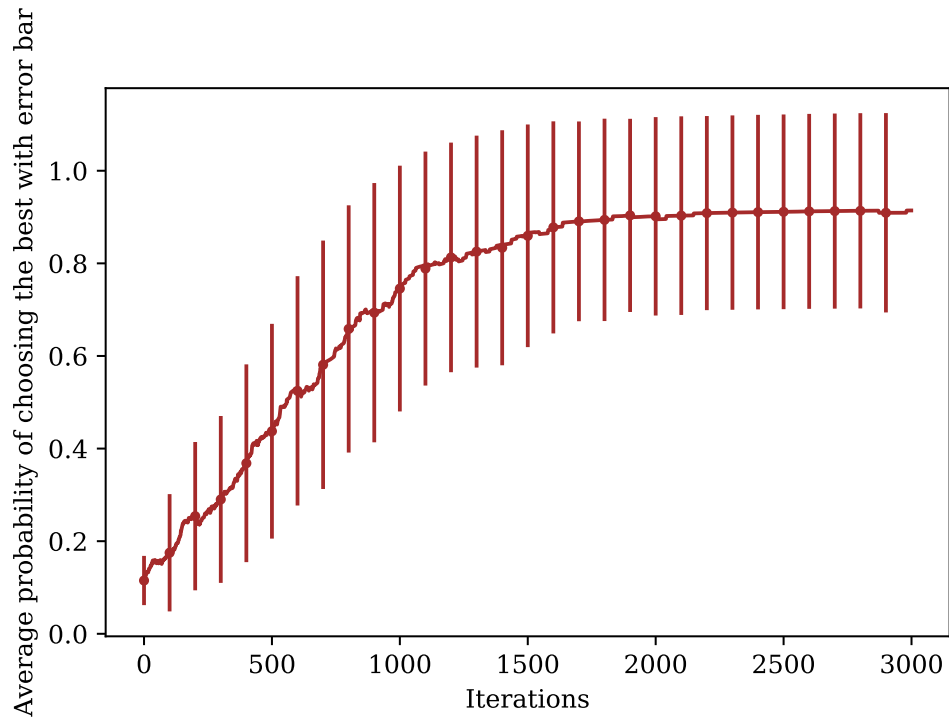


Figure 29: Probability for choosing the best against iteration time, average of 100 time run, with error bar

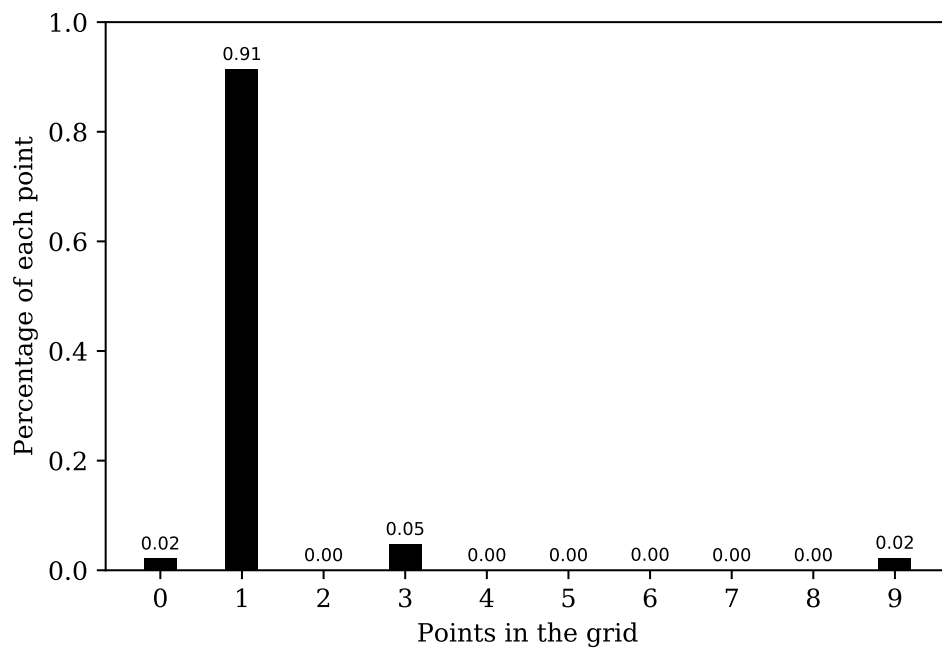


Figure 30: percentage of converging to the best, average of 100 time run, Histogram

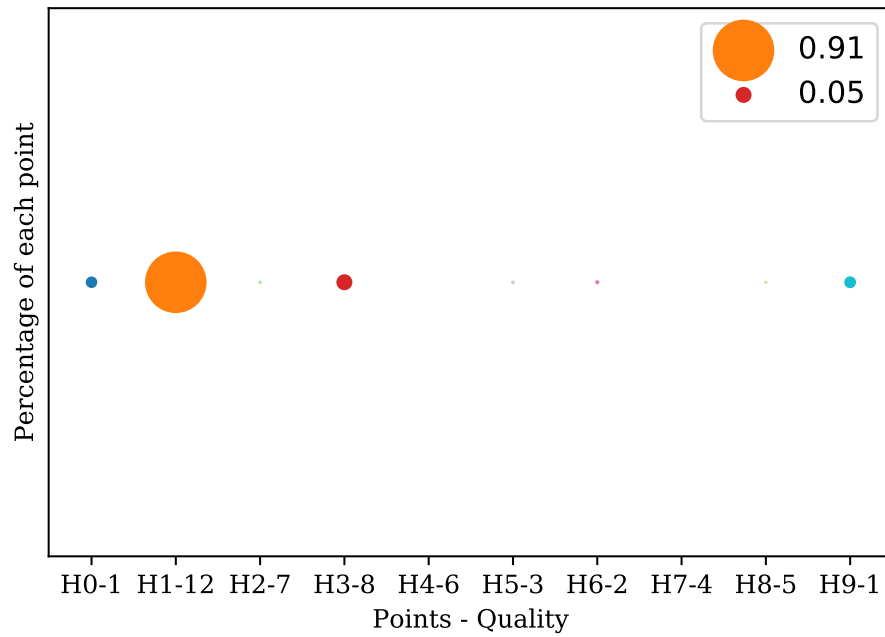


Figure 31: average percentage average of choosing to the best, average of 100 time run, circle

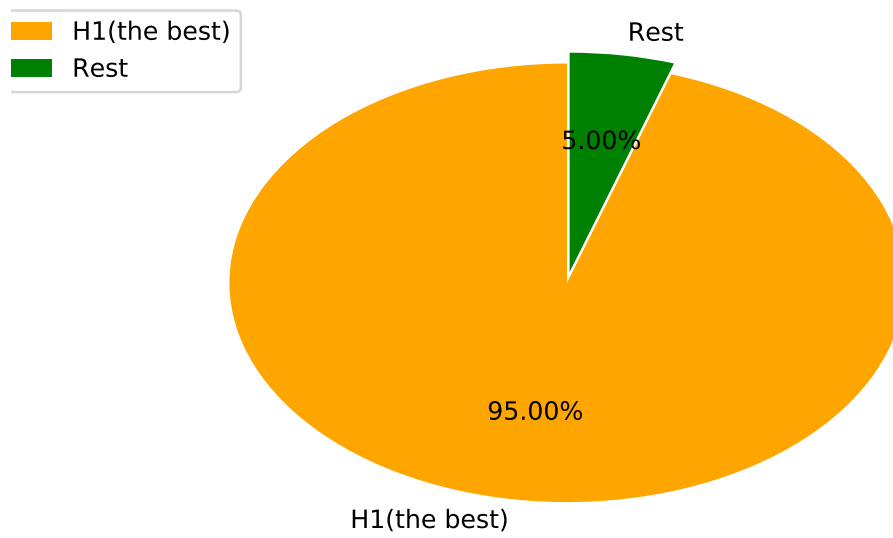


Figure 32: percentage of converging to the best, average of 100 time run, pie

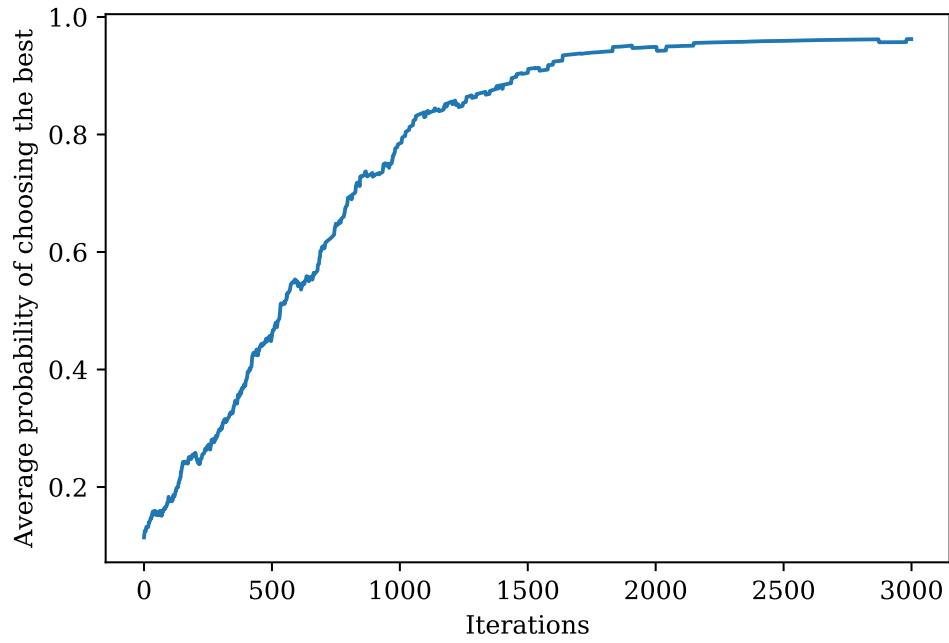


Figure 33: Probability for choosing the best against iteration time, average of 100 time run, only when converge to the best of $n(H1)$

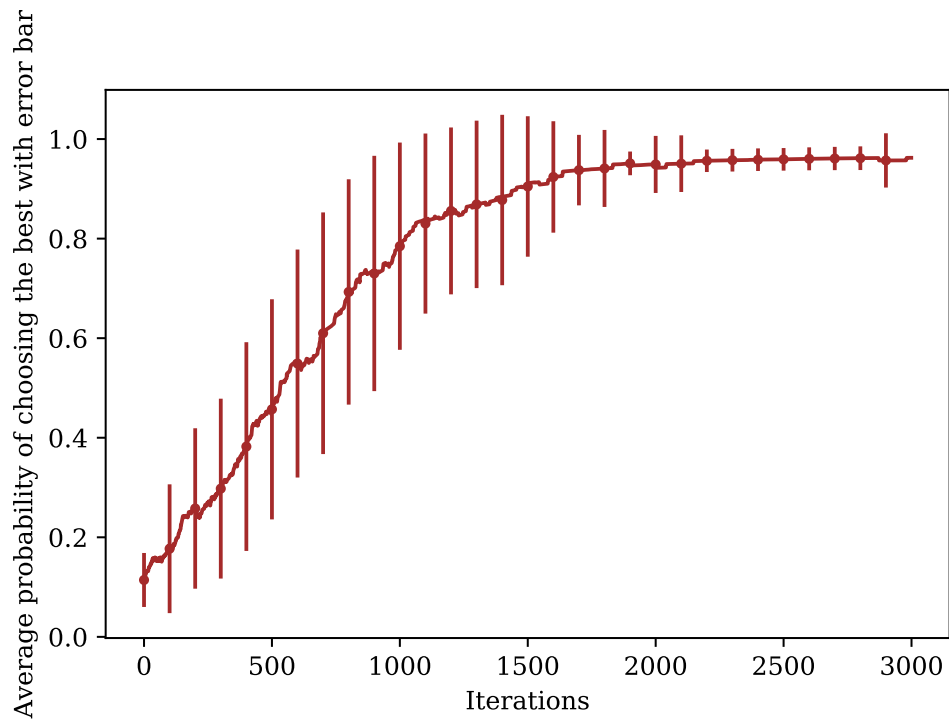


Figure 34: Probability for choosing the best against iteration time, average of 100 time run, only when converge to the best of $n(H1)$, with error bar

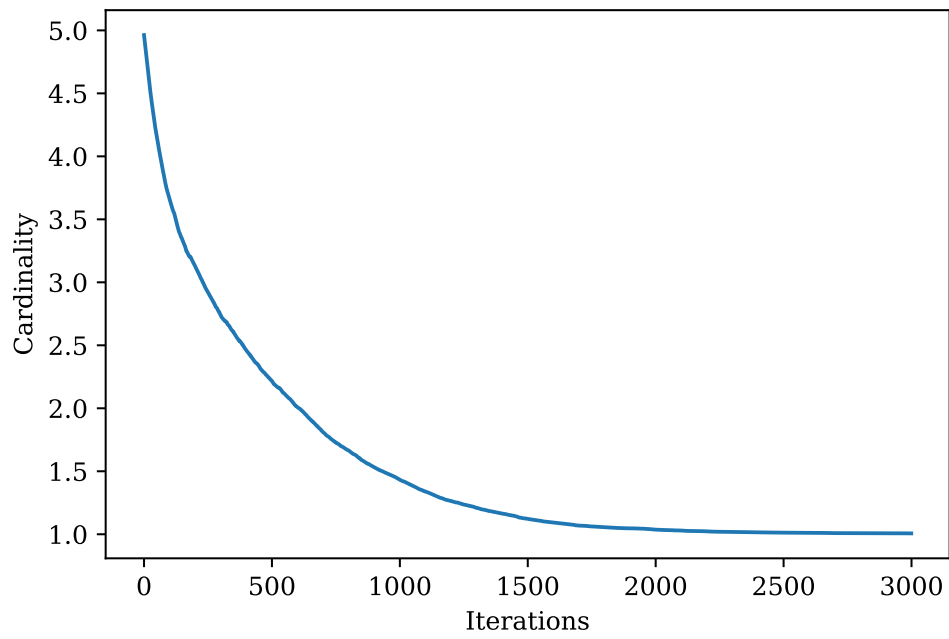


Figure 35: Cardinality against iteration time, average of 100 time run

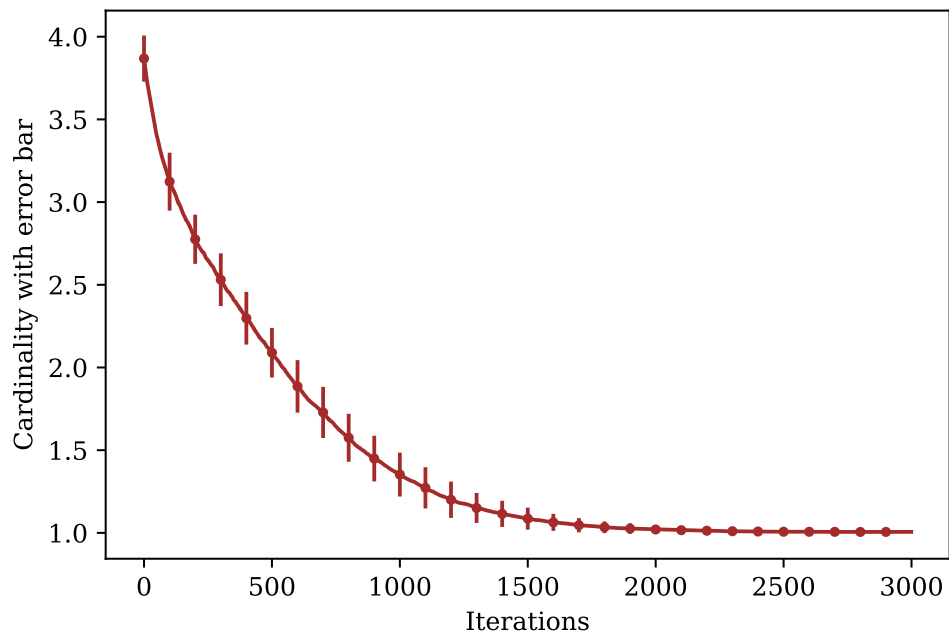


Figure 36: Cardinality against iteration time, average of 100 time run, with error bar