1. Abstract
2. Introduction
3. Related Works
4. Guided Local Search
   1. Introduction
      1. Hardness of QAP
      2. Definition of improvement heuristic (local search) and need for a more powerful framework (stuck at first local optimum)
      3. Local Neighborhood defined by 2-opt, 3-opt, etc.
   2. Background and Motivation
   3. Explanation
   4. Algorithm
   5. Efficient
   6. Extensions
      1. Best Improvement Aspiration Criteria
         1. Motivation and Description
         2. Results
      2. Random Moves
         1. Motivation and Description
         2. Results
5. Extensions
   1. Cite downfalls of GLS and preliminary motivations stemming to address these downfalls. Introduction/motivation quickly providing brief summary of all extensions tried
   2. Address diversification
      1. AspLate
      2. Noise
      3. Multi
   3. Address permanent penalization problem
      1. BestMove, BestMovePr
         1. Motivation and then implementation
      2. Steepest Descent
         1. Motivation
         2. sdAlways
         3. sdInterval
      3. Evaporation
         1. Motivation for evaporating
         2. Partial Evaporation (penalty.evap) – Worst, AllWorst, Late, AllLate
         3. Evaporate All Penalties
            1. EvapOnSwap
            2. EvapOnInterval
            3. EvapOnImprovement
            4. EvapSinceImprovement
            5. EvapSinceImprovementDecay
   4. Other tests
      1. LambdaPow
      2. Modifying Penalty Scheme (penalty)
         1. Util, AllUtil, PenaltyUtil (vary amount of penalizing)
         2. Cost, AllCost
      3. Steep
         1. Steep
         2. Steep.dist
         3. Steep.ts
         4. Steep.dist.ts
6. Results
   1. Experiment – CPU, 5 runs, 15 minutes, etc.
   2. Baseline Results – TS, GLS, RandomWalk, etc. – Table – 15 runs, 15 minutes
   3. Poor Results
      1. Give method name, percentages inline, analysis of results such as trends, and why it might have failed all (preserve method ordering as given in section above).
   4. Medium Results
      1. Give method name, table, analysis of results such as trends, why it was neutral performance

(preserve method ordering as given in section above)

* 1. Good results
     1. Give method name, chart, table, analysis of results (trends, etc.) and why it succeeded  
        (preserve method ordering as given in section above)

1. Conclusion
   1. Future Work