

Themes for programming

1. Optimal paths search.
2. Construction of the shortest spanning tree and spanning forest.
3. Centers and median search, p-centers and p-median search
4. Maximum flow search.
5. Minimal cost flow search.
6. Minimal dominating set search.
7. Search of the shortest cover and minimum cover..
8. The assignment problem solution.
9. The transport problem solution..
10. Optimal matching search.
11. The Chinese postman problem solution..
12. The traveling postman problem solution.
13. Drawing graph.
14. The coloring problem solution.

Themes for reports

1. Heuristic methods for the traveling salesman problem.
2. Search of k first minimum paths.
3. Latin properties, Latin composition method.
4. Steiner problem.
5. Edmonds algorithm modifications.
6. Heuristic methods for the p-center problem.
7. Heuristic methods for the p-median problem.
8. Network diagram.
9. Matching problem for non-bipartite graphs..
10. Heuristic methods for the Chinese postman problem (odd asymmetric graphs).
11. Theorem about the K_5 and $K_{3,3}$ graphs.
12. Brooks theorem.