

## Praktikum Diskrete Optimierung

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*Due Date: Monday, 18th June 2012, 12:00*

### **Aufgabe 1 (Spring layout springembedder)**

Implement the spring embedder algorithm for drawing undirected graphs.

First, the program should check whether the graph is connected and choose an appropriate strategy for unconnected graphs. To check for connectivity you could modify depth-first-search, for example.

After that, the layout algorithm is called and the process as well as the result of the algorithm is visualized. Implement the clipping heuristic for better performance.

Choose appropriate values for the constants  $c_0, c_1, l, \delta$  and  $d$  as well as an appropriate termination condition. As inputs you can use the graphs `graph1.gw` to `graph5.gw`.