Programming assignment 1

Heuristic Optimization Techniques, 2015WS

October 13, 2015

Construction heuristics [10 points]

The first programming assignment is to develop your *own* construction heuristic for the K-page crossing number minimization problem. The subtasks for this exercise are:

1. Develop a deterministic construction heuristic.

2. Develop a randomized/multi-solution construction heuristic. It is allowed that separately created solutions influence the execution of your algorithm.

3. Run experiments and write a report as discussed in the problem description.

4. Submit your best solution for each instance (in the described solution format) on the cluster.

For the development and the report consider the following points:

- How is your solution represented?

- Do you construct the spine order and the edge partitioning separately or in one step? Argue on the expected benefits of your approach.

- 2nd task: How do you generate different solutions? Which parts of your algorithm can be reasonably randomized and how do you ensure that it does not degenerate into random search?

- Does randomization improve the generated solutions?

Hand in your report via TUWEL until *2015-10-25, 23:55*. For further questions send an e-mail to: `heuopt-ws15@ac.tuwien.ac.at`